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Malaria Indicator Survey

2024–25

THE REPUBLIC OF UGANDA

Uganda

Malaria Indicator Survey 2024–25
Final Report

Uganda Bureau of Statistics (UBOS)
and
The National Malaria Control Division (NMCD)
Kampala, Uganda

The DHS Program, ICF
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PREFACE

The 2024–25 Uganda Malaria Indicator Survey (UMIS) is the fourth in a series of stand-alone malaria surveys that have been implemented in Uganda with the previous ones undertaken in 2009, 2014–15 and 2018–19. The survey was implemented by the Uganda Bureau of Statistics (UBOS) in collaboration with the Ministry of Health.

Three questionnaires were used in the 2024–25 UMIS, namely the Household Questionnaire, which was the main entry to the household collecting information on household individuals, household conditions and housing characteristics; the Woman's Questionnaire; and the Biomarker Questionnaire. The questionnaires were adapted to reflect the population and health issues relevant to Uganda. This report presents the findings from the survey and is structured in 6 chapters, namely Introduction and Survey Methodology; Housing, Household Population and Respondent Characteristics; Malaria Prevention; Malaria in Children; Malaria Knowledge, Attitudes and Behaviours; and lastly the Refugee Settlements.

I am very grateful to the Government of Uganda, the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), and the U.S. President's Malaria Initiative (PMI) for providing the required funds that enabled UBOS to carry out the survey and ICF for providing technical support. I extend my gratitude to the Steering and Technical Committees, the survey management team, all field staff and the individuals who responded to our questionnaires for their contribution towards the production of this report.

Chris N. Mukiza (PhD)
Executive Director/Chief Statistician

FOREWORD

Malaria remains a major public health problem in Uganda. In order to control and eliminate malaria, the Government of Uganda has implemented several interventions that include long-lasting insecticide-treated nets, testing and treatment, intermittent preventive treatment in pregnancy, indoor residual spraying, and, recently, seasonal malaria chemoprevention and the malaria vaccine.

In order to understand the impact of interventions on malaria burden, the country conducts a periodic national survey—the Uganda Malaria Indicator Survey (UMIS)—that measures parasite prevalence, anaemia, and the progress and status of key malaria indicators. The three previous surveys were conducted in 2009, 2014–15, and 2018–19 and indicated a national parasite prevalence of 42%, 19%, and 9%, respectively.

We are happy to report on the findings of another periodic survey—the 2024–25 UMIS—that aimed to provide current estimates of key malaria indicators. Specific objectives were to measure the extent of ownership, coverage, uptake, and use of malaria interventions such as mosquito nets and indoor residual spraying; assess coverage of intermittent preventive treatment to protect pregnant women; identify practices and specific medications used for treating malaria among children under age 5; measure indicators of behaviour change communication messages, knowledge, and practices related to malaria; and measure the prevalence of malaria and anaemia among children age 0–59 months.

This year's UMIS also separately sampled and covered special domains for refugee settlements and districts targeted for indoor residual spraying, in addition to the 15 subregions in Uganda. In addition, dried blood spot/filter paper samples were collected for molecular testing to allow detection of low-density and submicroscopic infections. Despite evidence of reductions in parasitaemia and improvement in some key indicators, there is an increase in parasite prevalence nationally that is attributed to the 2022 malaria epidemic and a post-COVID effect. In response to this increase, the country has developed a robust malaria elimination strategic plan that aims to achieve zero malaria deaths, incidence reduction in all districts, and elimination in 15 districts by 2030.

Lastly, we thank the Uganda Bureau of Statistics, the National Malaria Elimination Division, and the survey coordination teams and the principal investigator for a successful UMIS.

Dr. Jane Ruth Aceng Ocero
Minister of Health

ACKNOWLEDGEMENTS

The Ministry of Health leadership wishes to acknowledge and thank the National Malaria Elimination Division (NMED) and the Uganda Bureau of Statistics (UBOS) for the successful implementation and completion of the 2024–25 Uganda Malaria Indicator Survey (UMIS). We also thank ICF for providing technical assistance through The Demographic and Health Surveys (DHS) Program, which was funded by the United States Agency for International Development (USAID) through the President's Malaria Initiative (PMI). Other agencies and organisations that facilitated the implementation of the survey through technical or financial support were The Global Fund, the Government of Uganda, the Gates Foundation, and the World Health Organization (WHO).

The Ministry of Health would like to acknowledge Dr. Stavia Turyahabwe (Commissioner, Communicable Diseases Prevention and Control Department), Dr. Daniel Kyabayinze (Program Manager, NMED), Dr. Jimmy Opigo (former Assistant Commissioner, NMED), Dr. Bosco Agaba Bekiita (Principal Investigator, UMIS), Dr. Catherine Maiteki, Ms. Lucia Baguma, and Jane Basirika for the overall leadership and coordination of the UMIS, as well as the entire staff of the National Malaria Elimination Division for coordinating this important activity on behalf of the Ministry.

In a special way, we thank the management of UBOS, led by Executive Director Dr. Chris Mukiza; Mr. Stephen Baryahirwa; Ms. Audrey Kemigisha; and the entire UBOS team for leading the design, implementation, and reporting of the UMIS.

We appreciate in a special way all members of the UMIS Oversight and Technical Committee and the secretariats that were drawn from the following organizations: WHO, USAID, PMI, ICF, NMED, Jhpiego, the Ministry of Health Central Public Health Laboratories (CPHL), the Malaria Reduction Activity (MRA), Mbarara University of Science and Technology (MUST), the African Leaders Malaria Alliance (ALMA), Global Fund Country Coordinating Mechanism (CCM), and civil society representatives.

We extend sincere appreciation to all people who were not mentioned in this document but who provided input at different stages during the process and implementation of the survey.

We would like to thank in a special way the individual respondents and households in the various regions of Uganda who provided the valuable information and samples.

Lastly, I would like to commend everyone for the efforts and contribution towards malaria elimination in Uganda. Despite evidence of reductions in parasitaemia and improvement in some key indicators observed in this report, parasite prevalence has increased nationally since the previous survey (2018–19), which is attributed to the 2022 malaria epidemic and a post-COVID effect. In response to this increase, the country has developed a robust malaria elimination strategic plan that aims to achieve zero malaria deaths, incidence reduction in all districts, and elimination in 15 targeted districts by 2030.

Dr. Diana Atwine
Permanent Secretary

ACRONYMS AND ABBREVIATIONS

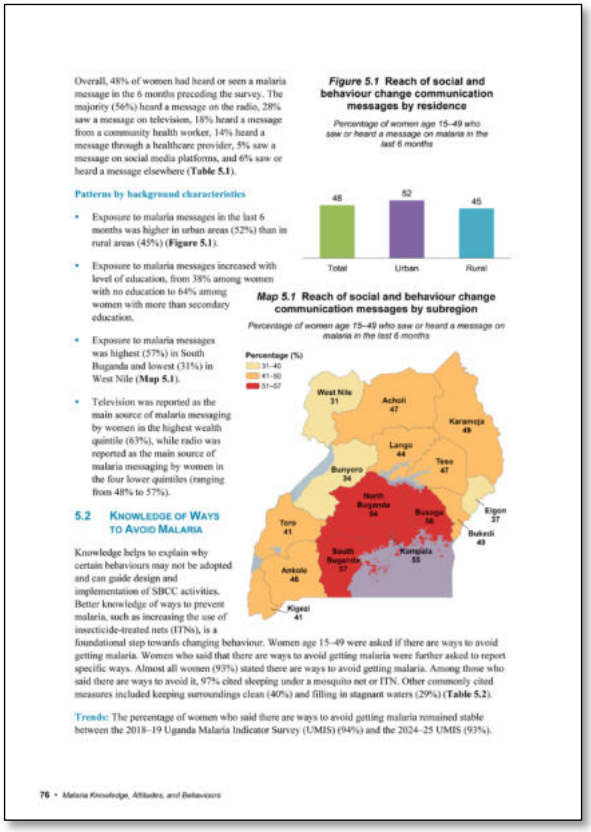
ACT	artemisinin-based combination therapy
ANC	antenatal care
CAPI	computer-assisted personal interviewing
CHW	community health worker
CMD	community medicine distributor
CPHL	Central Public Health Laboratory
CSPro	Census and Survey Processing System
DBS	dried blood spot
DEFT	design effect
DHS	Demographic and Health Survey
EA	enumeration area
EWRR	eligible women response rate
GFATM	Global Fund to Fight Against AIDS, Tuberculosis and Malaria
GPS	Global Positioning System
HRP2	histidine-rich protein 2
HRR	household response rate
IPTp	intermittent preventive treatment in pregnancy
IRS	indoor residual spraying
ITN	insecticide-treated net
JMP	Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene
LLIN	long-lasting insecticidal net
LPG	liquefied petroleum gas
MADETS	Malaria Data Entry and Tracking System
MoH	Ministry of Health
NDP IV	Fourth National Development Plan
NGO	nongovernmental organisation
NHLS	National Health Laboratory Services
NMCD	National Malaria Control Division
NPHC	National Population and Housing Census
OWRR	overall women response rate
P.f	*Plasmodium falciparum*
PMI	U.S. President's Malaria Initiative
PNFP	private not for profit

RBM	Roll Back Malaria
RDT	rapid diagnostic test
SBCC	social and behaviour change communication
SDG	Sustainable Development Goal
SE	standard error
SMC	seasonal malaria chemoprevention
SP	sulphadoxine-pyrimethamine
TOT	training of trainers
UBOS	Uganda Bureau of Statistics
UMESP	Uganda Malaria Elimination Strategic Plan
UMIS	Uganda Malaria Indicator Survey
UMRESP	Uganda Malaria Reduction and Elimination Strategic Plan
UNCST	Uganda National Council for Science and Technology
UNICEF	United Nations Children's Fund
UPHC	Uganda Population and Housing Census
USAID	United States Agency for International Development
VCD REC	Vector Control Division Research and Ethics Committee
VHT	village health team
WHO	World Health Organization

READING AND UNDERSTANDING TABLES FROM THE 2024–25 UGANDA MALARIA INDICATOR SURVEY (UMIS)

The following pages introduce the organisation of the Uganda Malaria Indicator Survey (UMIS) tables, present the background characteristics, and summarise how to sample and understand denominators. This section also provides exercises for users to practice interpreting UMIS tables.

The report is based on 53 tables of data, and these tables are typically located at the end of each chapter instead of being imbedded in the text. Although the text and figures featured in each chapter highlight some of the most important findings from the tables, not every finding can be discussed or displayed graphically. For this reason, data users should be comfortable reading and interpreting UMIS tables.



Overall, 48% of women had heard or seen a malaria message in the 6 months preceding the survey. The majority (56%) heard a message on the radio, 28% saw a message on television, 18% heard a message from a community health worker, 14% heard a message through a healthcare provider, 5% saw a message on social media platforms, and 6% saw or heard a message elsewhere (**Table 5.1**).

Patterns by background characteristics

- Exposure to malaria messages in the last 6 months was higher in urban areas (52%) than in rural areas (45%) (**Figure 5.1**).
- Exposure to malaria messages increased with level of education, from 38% among women with no education to 64% among women with more than secondary education.
- Exposure to malaria messages was highest (57%) in South Buganda and lowest (31%) in West Nile (**Map 5.1**).
- Television was reported as the main source of malaria messaging by women in the highest wealth quintile (63%), while radio was reported as the main source of malaria messaging by women in the four lower quintiles (ranging from 48% to 57%).

5.2 Knowledge of Ways to Avoid Malaria

Knowledge helps to explain why certain behaviours may not be adopted and can guide design and implementation of SBCC activities. Better knowledge of ways to prevent malaria, such as increasing the use of insecticide-treated nets (ITNs), is a foundational step towards changing behaviour. Women age 15–49 were asked if there are ways to avoid getting malaria. Women who said that there are ways to avoid getting malaria were further asked to report specific ways. Almost all women (93%) stated there are ways to avoid getting malaria. Among those who said there are ways to avoid it, 97% cited sleeping under a mosquito net or ITN. Other commonly cited measures included keeping surroundings clean (40%) and filling in stagnant waters (29%) (**Table 5.2**).

Trends: The percentage of women who said there are ways to avoid getting malaria remained stable between the 2018–19 Uganda Malaria Indicator Survey (UMIS) (94%) and the 2024–25 UMIS (93%).

Figure 5.1 **Reach of social and behaviour change communication messages by residence**

Percentage of women age 15–49 who saw or heard a message on malaria in the last 6 months

Map 5.1 **Reach of social and behaviour change communication messages by subregion**

Percentage of women age 15–49 who saw or heard a message on malaria in the last 6 months

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Example 1 Prevalence of Malaria in Children

A biomarker measure taken from all eligible respondents

Table 4.6 Prevalence of malaria in children 1

Percentage of children age 6–59 months classified by two tests as having malaria, according to background characteristics, Uganda MIS 2024–25

Background characteristic 3	Malaria prevalence according to RDT		Malaria prevalence according to microscopy		Malaria prevalence according to real-time PCR 2	
	RDT positive	Number of children	Microscopy positive	Number of children	PCR positive	Number of children
Age in months						
6–8	10.3	325	5.5	323	8.3	322
9–11	10.9	334	7.0	334	9.0	332
12–17	18.8	703	10.1	703	15.3	702
18–23	20.7	614	10.0	617	15.4	617
24–35	22.1	1,408	11.9	1,411	17.5	1,410
36–47	22.4	1,467	14.7	1,467	19.6	1,464
48–59	24.9	1,451	15.8	1,454	21.0	1,451
Mother's interview status						
Interviewed	20.2	4,721	11.6	4,721	16.7	4,715
Not interviewed[1]	23.8	1,580	15.1	1,587	19.7	1,584
Residence						
Urban	12.5	2,261	6.7	2,263	8.8	2,258
Rural	25.9	4,041	15.7	4,046	22.3	4,040
Subregion						
Kampala	0.9	98	0.4	98	1.3	98
Buganda	10.7	1,593	6.2	1,591	9.5	1,585
South Buganda	3.9	909	2.3	907	3.6	905
North Buganda	19.9	684	11.4	684	17.4	681
Busoga	29.5	569	20.9	573	28.4	573
Bukedi	16.2	434	11.9	434	17.0	434
Elgon	12.8	318	6.1	318	8.5	318
Teso	44.1	368	22.9	368	31.0	367
Lango	59.6	366	31.6	368	43.7	367
Acholi	46.5	268	23.3	268	31.7	268
Karamoja	39.9	258	26.3	258	31.8	258
West Nile	16.6	416	8.0	416	11.7	414
Bunyoro	26.3	479	17.6	481	21.2	481
Toro	13.9	463	9.2	463	15.7	463
Ankole	2.0	434	1.5	435	3.2	435
Kigezi	0.9	237	0.6	238	2.1	238
Mother's education[2]						
No education	27.9	509	16.9	510	21.6	510
Primary	25.1	2,699	13.8	2,702	20.4	2,697
Secondary	10.0	1,224	7.0	1,222	9.3	1,222
More than secondary	3.9	290	1.4	288	4.1	287
Special areas						
IRS districts[3]	20.5	783	11.6	783	16.7	782
SMC districts[4]	39.9	258	26.3	258	31.8	258
High altitude districts[5]	7.3	513	3.7	514	5.7	514
Wealth quintile						
Lowest	38.4	1,558	22.7	1,559	30.8	1,558
Second	24.4	1,029	16.7	1,030	22.5	1,029
Middle	19.7	1,347	11.8	1,352	16.3	1,350
Fourth	14.2	1,263	6.6	1,267	10.6	1,265
Highest	3.2	1,104	1.8	1,101	3.0	1,096
Total	21.1	6,301	12.5	6,309	17.4	6,298

Note: The RDT used in this survey detects only *P. falciparum* parasites, while microscopy and real-time PCR can detect any *Plasmodium* species.

IRS = indoor residual spraying; RDT = rapid diagnostic test (Bioline™ Malaria Ag P.f); SMC = seasonal malaria chemoprevention

[1] Includes children whose mothers are deceased

[2] For women who are not interviewed, information on education is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Step 1: Read the title and subtitle—highlighted in orange in Example 1. They tell you the topic and the specific population group being described. In this case, the table is about children age 6–59 months who were tested for malaria.

Step 2: Scan the column headings—highlighted in green in Example 1. They describe how the information is categorised. In this table, the first column of data shows children who tested positive for malaria according to a rapid diagnostic test (RDT). The second column lists the number of children in the survey age 6–59 months who were tested for malaria using RDT. The third column shows children who tested positive for malaria according to microscopy. The fourth column lists the number of children in the survey age 6–59 months who were tested for malaria using microscopy. The fifth column shows children who tested positive for malaria according to real-time PCR. The last column lists the number of children in the survey age 6–59 months who were tested for malaria using real-time PCR.

Step 3: Scan the row headings—the first vertical column highlighted in blue in Example 1. These show the different ways the data are divided into categories based on population characteristics. In this case, the table presents prevalence of malaria by age, mother's interview status, urban-rural residence, subregion, mother's educational level, and wealth; additionally, testing results are presented for children in households located in particular intervention areas called special areas (for example, high altitude districts), which are shown as a background characteristic. Most of the tables in the UMIS report will be divided into these categories.

Step 4: Look at the row at the bottom of the table—highlighted in red in Example 1. These percentages represent all children age 6–59 months who tested positive for malaria according to the different tests. In this case, 21.1%* of children age 6–59 months tested positive for malaria according to RDT, 12.5% tested positive for malaria according to microscopy, and 17.4% tested positive for malaria according to real-time PCR.

Step 5: Draw two imaginary lines, as shown on the table by the purple lines, to find out what percentage of children age 6–59 in Acholi tested positive for malaria according to microscopy. Where the lines meet shows that 23.3% of children age 6–59 months in Acholi tested positive for malaria according to microscopy.

Step 6: Look at the patterns in the table. By looking at patterns by background characteristic, we can see how malaria prevalence varies across Uganda. Resources are often limited. Knowing how malaria prevalence varies across groups can help programme planners and policymakers determine how to use resources effectively.

Practice: Use the table in Example 1 to answer the following questions about malaria prevalence *by microscopy*:

a) Is there a clear pattern in malaria prevalence by age?
b) What are the lowest and highest percentages (the range) of malaria prevalence by subregion?
c) Is there a clear pattern in malaria prevalence by mother's education level?

Answers:
a) Yes, malaria prevalence by microscopy increases with age, from 6% among children age 6–8 months to 16% among children age 48–59 months.
b) Malaria prevalence (microscopy) is lowest in Kampala (less than 1%) and highest in Lango (32%).
c) Yes, malaria prevalence decreases as mother's level of education increases; malaria prevalence is highest among children whose mothers have no education (17%) and lowest among children whose mothers have more than secondary education (1%).

* In this chapter, data are presented exactly as they appear in the table—including decimal places. However, data are rounded to the nearest whole percentage point in the other chapters of the report.

Example 2 Use of Mosquito Nets by Pregnant Women

A question asked of a subgroup of survey respondents

Table 3.7 Use of mosquito nets by pregnant women 1

Percentage of pregnant women age 15–49 who slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN) the night before the survey; and among pregnant women age 15–49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Uganda MIS 2024–25

	Pregnant women age 15–49 in all households			Pregnant women age 15–49 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of pregnant women	Percentage who slept under an ITN[1] last night	2 Number of pregnant women
Residence					
Urban	79.8	70.5	253	84.4	211
Rural	75.1	72.9	442	83.3	387
Subregion					
Kampala	(88.6)	(54.5)	18	(80.0)	13
Buganda	73.0	64.9	152	83.4	119
South Buganda	(73.9)	(63.8)	88	(83.2)	67
North Buganda	(71.8)	(66.5)	65	(83.6)	51
Busoga	(73.4)	(71.4)	61	(92.2)	47
Bukedi	76.5	73.7	56	79.3	53
Elgon	75.9	72.2	39	80.2	35
Teso	80.8	79.9	58	84.1	55
Lango	86.1	86.1	53	92.4	49
Acholi	(79.6)	(79.6)	27	(86.0)	25
Karamoja	69.3	68.2	42	78.9	37
West Nile	(72.9)	(72.9)	37	(79.0)	34
Bunyoro	80.8	74.4	54	82.4	49
Toro	(64.7)	(64.7)	40	(70.1)	37
Ankole	(90.7)	(80.2)	38	(96.2)	32
Kigezi	(78.2)	(67.8)	19	*	15
Education					
No education	78.8	78.8	61	88.9	54
Primary	75.6	72.4	425	84.0	366
Secondary	77.4	69.5	174	81.2	149
More than secondary	(85.6)	(68.2)	35	(82.0)	29
Special areas					
IRS districts[2]	80.5	78.4	102	84.0	95
SMC districts[3]	69.3	68.2	42	78.9	37
High altitude districts[4]	77.9	71.5	53	80.8	47
Wealth quintile					
Lowest	77.4	77.4	181	84.6	166
Second	73.3	71.7	154	82.8	133
Middle	68.8	67.9	112	80.9	94
Fourth	78.0	72.2	122	83.6	105
Highest	86.3	68.1	126	86.0	100
Total	76.8	72.0	695	83.7	598

Note: Table is based on women who stayed in the household the night before the interview. Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).
[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Step 1: Read the title and subtitle. In this case, the table is about two separate groups of pregnant women age 15–49: pregnant women age 15–49 in all households (a) and pregnant women age 15–49 in households with at least one ITN (b).

Step 2: Identify the two panels. First, identify the columns that refer to pregnant women age 15–49 in all households (a), and then isolate the columns that refer only to pregnant women age 15–49 in households with at least one ITN (b).

Step 3: Find the denominators for each indicator in the table. How many pregnant women age 15–49 in all households were interviewed? It's 695. Now look at the second panel. How many pregnant women age 15–49 in households with at least one ITN were interviewed? It's 598. The second panel is a subset of the first panel.

Step 4: Once these pregnant women are further divided into categories of background characteristics, the number of cases in some categories may be too small for the percentages to be reliable.

- What percentage of pregnant women age 15–49 with more than secondary education in all households slept under an ITN the night before the survey? 68.2%. This percentage is in parentheses because between 25 and 49 pregnant women age 15–49 (unweighted) are in this category. You should use this number with caution—it may not be reliable. (See Example 3 for more information on weighted and unweighted numbers.)

- What percentage of pregnant women age 15–49 in households with at least one ITN in Kigezi slept under an ITN the night before the survey? No number is in this cell—only an asterisk. This is because fewer than 25 pregnant women age 15–49 were interviewed in households with at least one ITN in Kigezi in this survey. Results for this group are not reported. The subgroup is too small, so the data are not reliable.

When parentheses or asterisks are used in a table, the explanation will be noted under the table. If a table contains no parentheses or asterisks, you can proceed with confidence that enough cases were included in all categories for the data to be reliable.

Example 3 Understanding Sampling Weights in UMIS Tables

Table 2.11 Background characteristics of respondents

Percent distribution and number of women age 15–49, according to selected background characteristics, Uganda MIS 2024–25

Background characteristic	Weighted percent 3	Weighted number 2	Unweighted number 1
Subregion			
Kampala	3.0	279	636
Buganda	30.0	2,772	1,409
South Buganda	18.9	1,748	790
North Buganda	11.1	1,024	619
Busoga	7.9	728	608
Bukedi	5.4	503	605
Elgon	4.2	386	578
Teso	5.2	481	608
Lango	5.8	538	649
Acholi	4.0	368	557
Karamoja	2.8	259	531
West Nile	6.6	607	676
Bunyoro	6.6	610	690
Toro	6.8	625	591
Ankole	7.8	724	575
Kigezi	3.9	361	525
Total 15–49	100.0	9,238	9,238

A sample is a group of people who have been selected for a survey. In the UMIS, the sample is designed to represent the national population age 15–49. In addition to national data, most countries want to collect and report data on smaller geographical or administrative areas. However, doing so requires a minimum sample size per area. For the 2024–25 UMIS, the survey sample is representative at the national and subregion levels, and for urban and rural areas.

To generate statistics that are representative of the country as a whole and of the 15 subregions, the number of women surveyed in each subregion should contribute to the size of the total (national) sample in proportion to the size of the subregion. However, if some subregions have small populations, then a sample allocated in proportion to each subregion's population may not include sufficient women from each district for analysis. To solve this problem, subregions with small populations are oversampled. For example, let's say that you have enough money to interview 9,238 women and want to produce results that are representative of Uganda as a whole and of its subregions (as in Example 3). However, the total population of Uganda is not evenly distributed among the subregions. Some subregions, such as South Buganda, are heavily populated while others, such as Kigezi, are not. Thus, Kigezi must be oversampled.

To get reliable statistics, a sampling statistician determines how many women should be interviewed in each subregion. The **blue column (1)** in Example 3 shows the actual number of women interviewed in each subregion. Within the subregions, the number of women interviewed ranges from 525 in Kigezi to 790 in South Buganda. The number of interviews is sufficient to obtain reliable results in each subregion.

With this distribution of interviews, some subregions are overrepresented, and some subregions are underrepresented. For example, the population in South Buganda is about 18.9% of the population in Uganda, while Kigezi's population contributes only 3.9% of the population in Uganda. But, as the blue column shows, the number of women interviewed in South Buganda accounts for only 8.6% of the total sample of women interviewed (790/9,238) and the number of women interviewed in Kigezi accounts for almost the same percentage of the total sample of women interviewed, 5.7% (or 525/9238). This unweighted distribution of women does not accurately represent the population.

To obtain statistics that are representative of Uganda, the distribution of women in the sample needs to be weighted (or mathematically adjusted) so that it resembles the true distribution in the country. Women from a less populous subregion, like Kigezi, should contribute only a small amount to the national total.

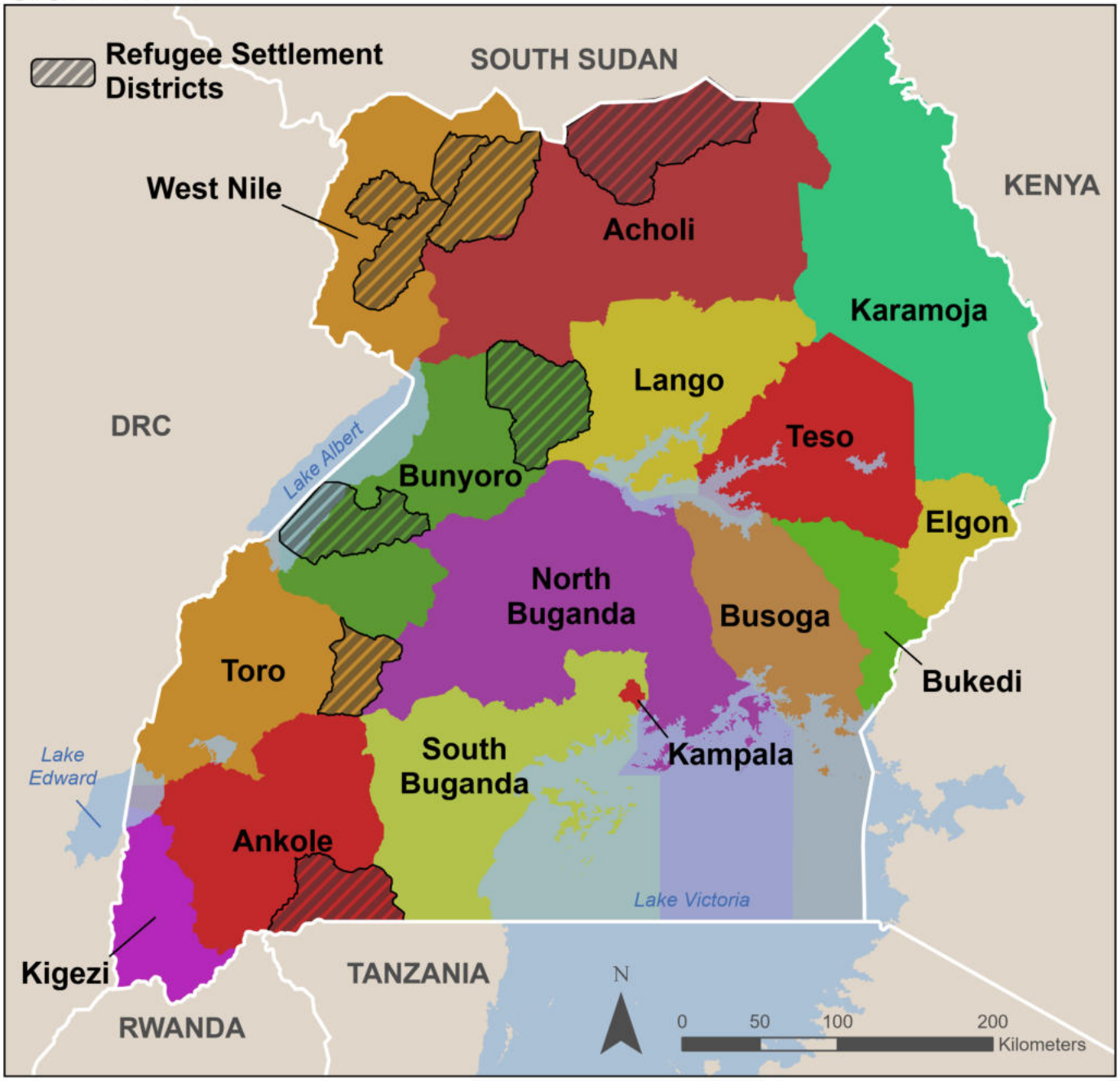
Women from a more populous subregion, like South Buganda, should contribute much more. Therefore, demographic and health survey statisticians mathematically calculate a "weight" that is used to adjust the number of women from each subregion so that each subregion's contribution to the total is proportional to the actual population of the subregion. The numbers in the **purple column (2)** represent the "weighted" values. The weighted values can be smaller or larger than the unweighted values at the subregion level. The total national sample size of 9,238 women has not changed after weighting, but the distribution of the women in the subregions has been changed to represent their contribution to the total population size.

How do statisticians weight each category? They take into account the probability that a woman was selected in the sample. If you were to compare the **green column (3)** to the actual population distribution of Uganda, you would see that women in each subregion are contributing to the total sample with the same weight that they contribute to the population of the country. The weighted number of women in the survey now accurately represents the proportion of women who live in South Buganda and the proportion of women who live in Kigezi.

With sampling and weighting, it is possible to interview enough women to provide reliable statistics at national and subregion levels. In general, only the weighted numbers are shown in each of the UMIS tables, so do not be surprised if these numbers seem low; they may represent a larger number of women interviewed.

MAPS OF UGANDA

MAPS OF UGANDA



INTRODUCTION AND SURVEY METHODOLOGY 1

The 2024–25 Uganda Malaria Indicator Survey (UMIS) was implemented by the National Malaria Control Division (NMCD) and the Uganda Bureau of Statistics (UBOS). Data collection took place from 29 November 2024 to 3 February 2025. ICF provided technical assistance through The Demographic and Health Surveys (DHS) Program, which was funded by the United States Agency for International Development (USAID) through the U.S. President's Malaria Initiative (PMI). Other agencies and organisations that facilitated the implementation of the survey through technical or financial support were the Global Fund, the Government of Uganda, and the Gates Foundation.

1.1 Survey Objectives

The primary objective of the 2024–25 UMIS was to provide up-to-date estimates of basic demographic and health indicators related to malaria. Specifically, the UMIS collected information on vector control interventions (for example, mosquito nets), intermittent preventive treatment of malaria in pregnant women, and care seeking for and treatment of fever in children. Young children were also tested for malaria infection.

The information collected through the 2024–25 UMIS is intended to assist policymakers and programme managers in evaluating and designing programmes and strategies for improving the health of the country's population.

1.2 Sample Design

The 2024–25 UMIS followed a two-stage sampling design and was intended to allow estimates of key indicators for the following domains:

- National level
- Urban and rural areas
- Refugee settlements
- 15 subregions and their respective districts (see list to the right)

Subregion	Districts
South Buganda	Bukomansimbi, Butambala, Gomba, Kalangala, Kalungu, Kyotera, Lwengo, Lyantonde, Masaka, Masaka City, Mpigi, Rakai, Sembabule, and Wakiso
North Buganda	Buikwe, Buvuma, Kassanda, Kayunga, Kiboga, Kyankwanzi, Luwero, Mityana, Mubende, Mukono, Nakaseke, and Nakasongola
Kampala	Kampala
Busoga	Bugiri, Bugweri, Buyende, Iganga, Jinja, Jinja City, Kaliro, Kamuli, Luuka, Mayuge, Namayingo, and Namutumba
Bukedi	Budaka, Busia, Butaleja, Butebo, Kibuku, Pallisa, and Tororo
Elgon	Bududa, Bukwo, Bulambuli, Kapchorwa, Kween, Manafwa, Mbale, Mbale City, Namisindwa, and Sironko
Teso	Amuria, Bukedea, Kaberamaido, Kalaki, Kapelebyong, Katakwi, Kumi, Ngora, Serere, Soroti, and Soroti City
Karamoja	Abim, Amudat, Kaabong, Karenga, Kotido, Moroto, Nabilatuk, Nakapiripirit, and Napak
Lango	Alebtong, Amolatar, Apac, Dokolo, Kole, Kwania, Lira, Lira City, Otuke, and Oyam
Acholi	Agago, Amuru, Gulu, Gulu City, Kitgum, Lamwo, Nwoya, Omoro, and Pader
West Nile	Adjumani, Arua, Arua City, Koboko, Madi-Okollo, Maracha, Moyo, Nebbi, Obongi, Pakwach, Terego, Yumbe, and Zombo
Bunyoro	Buliisa, Hoima, Hoima City, Kagadi, Kakumiro, Kibaale, Kikuube, Kiryandongo, and Masindi
Tooro	Bundibugyo, Bunyangabu, Fort Portal City, Kabarole, Kamwenge, Kasese, Kitagwenda, Kyegegwa, Kyenjojo, and Ntoroko
Kigezi	Kabale, Kanungu, Kisoro, Rubanda, Rukiga, and Rukungiri
Ankole	Buhweju, Bushenyi, Ibanda, Isingiro, Kazo, Kiruhura, Mbarara, Mbarara City, Mitooma, Ntungamo, Rubirizi, Rwampara, and Sheema

Refugee settlements in Adjumani, Isingiro, Kiryandongo, Kyegegwa, Lamwo, Madi-Okollo, Obongi, Terego, and Yumbe Districts were included as a separate sampling domain.

The overall sample size also allowed estimates to be produced for the following special areas, although they were not included as separate sampling domains:

- The 20 indoor residual spraying (IRS) intervention districts: Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalaki, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
- The 9 seasonal malaria chemoprevention (SMC) districts: Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napak
- The 15 high altitude districts: Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

The first stage of sampling involved selecting sample points (clusters) from the sampling frames; the non-refugee areas and the refugee settlements used separate sampling frames. Enumeration areas (EAs) delineated for the 2024 National Population and Housing Census (NPHC) were used as the sampling frame for both non-refugee and refugee areas. A total of 322 clusters were selected with probability proportional to size from the EAs covered in the 2024 NPHC from the non-refugee frame. Of these clusters, 130 were in urban areas and 192 in rural areas. Urban areas were oversampled to produce robust estimates for the urban/rural domain. A total of 20 clusters were selected with probability proportional to size from the EAs covered in the refugee frame.

The second stage of sampling involved random selection of households. Given that the 2024 NPHC had been conducted less than 6 months before the UMIS, new household lists were not created for the selected non-refugee clusters. Instead, lists of households generated from the NPHC for the selected clusters were used, and households were randomly selected from those lists to be included in the UMIS. In the selected clusters for the refugee settlements domain, new household lists were created immediately before fieldwork began in those clusters. Before household selection in all clusters, a validation exercise was carried out in two urban and two rural clusters to determine the percentage of sampled households that could be identified in the field. Due to challenges in counting structures and households in the census listing, the validation exercise showed that not all the selected households could be identified in the field. This exercise led to a decision to oversample; instead of selecting 28 households per cluster, 36 households were selected per cluster in Kampala and other major urban areas, and 30 households were selected per cluster in the rest of the areas, yielding a total of 10,011 households in the non-refugee clusters and 600 in the refugee clusters. Because of the approximately equal sample sizes in each domain, the sample was not self-weighted at the national level. Results shown in this report have been weighted to account for the complex sample design.

Because a separate sampling frame was used to identify the clusters containing refugee settlements, results for the refugee settlements are presented in a separate chapter.

All women age 15–49 who were either permanent residents of the selected households or visitors who stayed in the household the night before the survey were eligible to be interviewed. With the parent's or guardian's consent, children age 6–59 months were tested for malaria infection.

See Appendix A for additional details on the sampling procedures and Appendix B for estimates of sampling errors.

1.3 QUESTIONNAIRES

Three questionnaires were used in the 2024–25 UMIS: the Household Questionnaire, the Woman's Questionnaire, and the Biomarker Questionnaire. The questionnaires, based on The DHS Program's model questionnaires, were adapted to reflect the population and health issues relevant to Uganda. The English questionnaires were also translated into Luganda, Luo, Lugbara, Ateso, Runyankole/Rukiga, and

Runyoro/Rutoro. The Household and Woman's Questionnaires were programmed onto tablet computers, enabling use of computer-assisted personal interviewing (CAPI) for the survey. The Biomarker Questionnaire was filled out on hard copy and entered into the CAPI system when complete.

The Household Questionnaire was used to list all usual members of and visitors to selected households. Basic information was collected on the characteristics of each person listed in the household, including his or her age, sex, and relationship to the head of the household. The data on the age and sex of household members, obtained from the Household Questionnaire, were used to identify women eligible for an individual interview and children age 6–59 months eligible for malaria testing. Additionally, the Household Questionnaire captured information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor, ownership of various durable goods, IRS, and ownership and use of mosquito nets. Global Positioning System (GPS) coordinates were also collected in this questionnaire.

The Woman's Questionnaire was used to collect information from all women age 15–49. These women were asked questions on the following main topics:

- Background characteristics (age, residential history, education, literacy, religion, and ethnicity)
- Reproduction (birth history and child mortality)
- Pregnancy and intermittent preventive treatment
- Prevalence and treatment of fever among children under age 5
- Malaria knowledge and beliefs

The Biomarker Questionnaire was used to record the results of the malaria testing of children age 6–59 months.

Consent statements were developed for the Household and Woman's Questionnaires. The Biomarker Questionnaire included individual consent statements for malaria testing and for the treatment of children with positive malaria rapid diagnostic tests (RDTs).

The questionnaires and the survey protocol were reviewed and approved by the Uganda National Council for Science and Technology (UNCST), the Vector Control Division Research and Ethics Committee (VCD REC), and the institutional review board at ICF. Respondents provided written consent prior to participation in the survey. All data and other information collected were kept confidential. Respondents' names and personal identifying information were removed from the electronic dataset during data finalisation. The risks and benefits of participation in the survey were explained to respondents, and informed consent for interviews and/or blood collection was sought.

A fourth questionnaire, a self-administered Fieldworker Questionnaire, was used to collect basic background information on the people collecting data in the field, including team supervisors, interviewers, and biomarker technicians.

1.4 Malaria Testing

Blood samples for biomarker testing were collected via finger or heel pricks from children age 6–59 months. Each field team included two biomarker technicians who carried out the malaria testing and prepared the blood smears. A nurse provided malaria medications for children who tested positive for malaria by RDT in accordance with the approved treatment guidelines. The biomarker technicians requested informed consent for RDT and dried blood spot (DBS) testing from the child's parent or guardian before the blood samples were collected.

Malaria testing using a rapid diagnostic test. A drop of blood, taken from the finger or heel prick, was tested immediately using the Uganda-approved SD Bioline™ Malaria Ag P.f RDT. This qualitative test detects the histidine-rich protein 2 (HRP2) antigen of *Plasmodium falciparum* in human whole blood. The

P. falciparum parasite, transmitted by the *Anopheles* mosquito, is the major cause of malaria in Uganda. The diagnostic test kit includes a disposable sample applicator that comes in a standard package. A tiny volume of blood is captured on the applicator and placed in the well of the testing device. All technicians were trained to perform the RDT in the field in accordance with the manufacturer's instructions. RDT results were available in 15 minutes and recorded as either positive or negative, with faint test lines considered positive. The RDT results were provided to the child's parent or guardian verbally and in written form and were recorded on the Biomarker Questionnaire.

Children who tested positive for malaria according to the RDT and had been treated with artemisinin-based combination therapy (ACT) within 2 weeks before the day of the interview were referred to a health facility if they continued to have a fever 2 days after the last dose of ACT. In addition, children who tested positive according to the RDT, had not taken antimalarials in the past 3 days, and had symptoms indicative of severe illness were considered to have severe malaria and were referred to a health facility for immediate treatment. Children who tested positive for uncomplicated malaria were offered a full course of medication according to the standard treatment guidelines in Uganda. Age-appropriate doses of ACT (artemether-lumefantrine) were provided to the parent/guardian, along with instructions on how to administer the medicine to the child.

Malaria testing by microscopy. In addition to the RDT, thick blood smears were prepared in the field. Each blood smear slide was given a barcode label, with a duplicate affixed to the Biomarker Questionnaire. An additional copy of the barcode label was affixed to a microscope slide transmittal form to track the blood smears from the field to the laboratory. Blood smear slides were dried in a dust-free environment and stored in slide boxes. The thick smear slides were collected regularly from the field and transported to the Central Public Health Laboratory (CPHL) for logging, staining, and microscopic reading.

Thick blood smears were stained with Giemsa stain and examined to determine the presence or absence of *Plasmodium* parasites and to determine parasite density. Blood smears were considered negative if no parasites were found after 100 high-powered fields had been examined. If parasites were present, the microscopist counted both asexual parasites and white blood cells. All stained slides were read by two independent microscopists certified by the World Organization (WHO). Slides with discrepant results were reanalysed by a third microscopist to determine the final result. Slides were tracked from their arrival in the lab through the examination process using the Malaria Data Entry and Tracking System (MADETS), a Census and Survey Processing (CSPro) application developed by The DHS Program.

Malaria testing by real-time PCR. In addition to thick blood smears, DBSs were prepared by applying finger or heel blood drops to fully saturate the five designated circles on LabMate perforated Whatman filter cards. To ensure traceability from field collection to laboratory processing, a copy of the barcode label was affixed to the DBS card and transmittal form. The DBS cards were dried overnight in a dust-free environment, then sealed in plastic bags containing two to three desiccant packs to maintain sample integrity. The DBS cards were regularly transported to the CPHL, where they were logged into the sample DBS tracking system for processing. For storage, the cards were initially kept at −20°C and subsequently transferred to −80°C for long-term preservation.

Parasite DNA was extracted from DBSs using the Chelex-100/Tween-20 protocol, as described by Katairo and colleagues (Katairo et al. 2025). A SYBR Green-based real-time PCR assay targeting the *Plasmodium* 18S rRNA gene was employed to identify malaria parasite species *P. falciparum, P. malariae, P. vale*, and *P. vivax* (Sazed et al. 2021). To enhance diagnostic accuracy, a serial testing algorithm was applied. Initial screening was conducted using a multiplex PCR assay with species-specific primers to simultaneously amplify all four *Plasmodium* species. A sample was considered positive if it exhibited a sigmoidal amplification curve with a cycle threshold <35 and a melting peak within the expected temperature range. To increase specificity and enable detection of mixed-species infections, all positive samples were subjected to a second round of testing using a singleplex PCR assay for each species. A sample was

confirmed positive for a given species if the singleplex assay produced a sigmoidal amplification curve, a cycle threshold <35, and a melt peak within the expected temperature range (*P. falciparum* = 76 °C ± 1 °C; *P. malariae* = 73 °C ± 1 °C; *P. ovale* = 82 °C ± 1 °C; *P. vivax* = 79 °C ± 1 °C). Each PCR run included positive controls for all species, sourced from WHO proficiency testing panels, and nuclease-free water as the negative control.

1.5 Training of Trainers

The main training of trainers (TOT) for the 2024–25 UMIS was held at the Piato Hotel in Kampala from 23 to 28 October 2024, followed by a specialised biomarker TOT conducted from 30 October to 4 November 2024. The sessions were designed to prepare trainers and regional biomarker coordinators to effectively lead field training and oversee data collection.

Sixteen UBOS staff members (10 men and 6 women) participated in the main TOT, which focused on updates to the UMIS design, new CAPI system features, adult learning methodologies, and the development of standardised training materials. The biomarker TOT engaged five regional coordinators (three women and two men), who were trained in all technical aspects of biomarker collection and survey implementation. Overall, the full TOT strengthened the capacity of trainers and coordinators to deliver consistent, high-quality instruction and supervision during implementation of the 2024–25 UMIS.

1.6 Training of Field Staff

UBOS recruited and trained 92 fieldworkers (all female) to serve as interviewers for the main fieldwork, including 30 nurses. In addition, 46 health technicians (35 male and 11 female) were recruited and trained separately. All health technicians were qualified laboratory technicians with relevant credentials.

The interviewer training was conducted from 1 to 21 November 2024 at the Silver Springs Hotel in Kampala. Twenty-two trainers, all of whom had participated in the TOT, facilitated the training. Interviewer trainees were trained in interview techniques, questionnaire administration, and use of tablets for CAPI. Training for the health technicians focused on malaria testing procedures, including RDTs, thick blood smear preparation, and DBS sample collection.

The interviewer training sessions covered key concepts, procedures, and methodologies for conducting the UMIS. Participants were guided through the questionnaires using a range of training methods, including role-plays, group discussions, in-class exercises, videos, and presentations. The training also introduced the CAPI system, with demonstrations of its menus and hands-on practice in conducting interviews and entering biomarker data from the Biomarker Questionnaire.

The biomarker training employed a variety of learning tools such as plenary lectures; instructional videos; demonstrations of biomarker collection procedures; and practical exercises on completing questionnaires, transmittal sheets, referrals, and brochures. Trainees received instruction on the use of rapid test kits for malaria, preparation of blood smears for malaria microscopy, preparation of DBS cards, and proper drying and packaging of smears and DBS cards for transport. In addition, participants gained hands-on experience conducting these procedures with children during several clinic visits.

A field practice exercise was conducted from 16 to 17 November 2024 in selected clusters outside Kampala. Clusters were chosen to include households speaking the various translated survey languages, allowing teams to test questionnaire translations in real field settings. Each team was assigned two clusters of 10 households each and tasked with completing interviews over the 2-day period. A joint debrief was held on 20 November 2024 with interviewers and biomarker staff to discuss lessons learned and areas for reinforcement. Additional practice sessions were conducted that day to strengthen translation consistency and ensure adherence to consent procedures, which require written authorisation from all participants in accordance with Uganda institutional review board requirements.

1.7 Fieldwork

Following the main training, 138 trainees were organised into 23 teams of six members each. Team supervisors were selected from among the trained interviewers.

Each team comprised a team leader, two interviewers, one nurse/interviewer, and two health technicians. To ensure effective coordination, team leaders received additional training in technical oversight, task organisation, logistics management, and stakeholder engagement, including liaising with local authorities and community members. Each team was assigned a driver and vehicle to support field operations.

All 23 teams operated under the supervision of experienced UBOS personnel specialising in data collection. In addition, a national health technician supervisor and four regional biomarker coordinators were responsible for monitoring the quality of sample collection and packaging. These supervisors conducted routine quality checks and ensured that only samples meeting established standards were transported to the CPHL.

Field data collection for the 2024–25 UMIS took place from 29 November 2024 to 3 February 2025. Team deployment was guided by interviewers' language proficiency and knowledge of local areas.

To ensure maximum supervision, national monitors, including members of the technical working group and senior UBOS management, visited all 23 teams throughout the data collection period.

1.8 Data Processing

All electronic data files for the 2024–25 UMIS were transferred via ICF's Internet File Streaming System to the UBOS central office in Kampala, where they were stored on a password-protected computer. Data processing included registration, verification, and checks for completeness, consistency, and outliers. Secondary editing involved resolving computer-identified inconsistencies and coding open-ended responses. These tasks were carried out by UBOS staff who participated in the main fieldwork training, under the supervision of senior UBOS personnel. Data were edited using CSPro software. Secondary editing and overall data processing were completed in September 2025.

1.9 Response Rates

As described in Section 1.2, the refugee settlements included in the survey were drawn from a different sampling frame than the one used for the main survey. Because results from separate sampling frames cannot be combined to produce representative national estimates, data from refugee settlements are presented separately throughout the report.

Table 1.1 presents response rates for the 2024–25 UMIS. A total of 10,011 households were selected for the main survey, of which 9,584 were occupied at the time of fieldwork. Interviews were completed in 9,458 households, yielding a household response rate of 99%. In these households, 9,530 women age 15–49 were identified for individual interviews, and 9,238 were interviewed, resulting in a response rate of 97% among eligible women. In the refugee settlements, the household response rate was nearly 100%, and the response rate among women was 98%. See Appendix C for additional data quality tables.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Uganda MIS 2024–25

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	4,220	5,791	10,011
Households occupied	3,987	5,597	9,584
Households interviewed	3,917	5,541	9,458
Household response rate[1]	98.2	99.0	98.7
Interviews with women age 15–49			
Number of eligible women	4,096	5,434	9,530
Number of eligible women interviewed	3,946	5,292	9,238
Eligible women response rate[2]	96.3	97.4	96.9

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

HOUSING, HOUSEHOLD POPULATION, AND RESPONDENT CHARACTERISTICS

2

Key Findings

- ***Drinking water:*** Most urban households (90%) had access to an improved source of drinking water, while 79% of rural households did. Overall, 84% of households had access to an improved source of drinking water.
- ***Sanitation:*** Slightly more than half of households (54%) used an improved toilet facility, 42% used an unimproved one, and 4% had no toilet facility.
- ***Electricity:*** More than 4 in 10 households (43%) in Uganda had access to electricity (61% in urban areas and 31% in rural areas).
- ***Educational attainment:*** On average, women age 15–49 had completed a median of 6.4 years of education (7.9 in urban areas and 5.7 in rural areas).
- ***Literacy:*** Overall, 77% of women in Uganda were literate (85% in urban areas and 71% in rural areas).

Information on the socioeconomic characteristics of the household population in the 2024–25 Uganda Malaria Indicator Survey (UMIS) provides context for interpreting demographic and health indicators and gives an approximate indication of the representativeness of the survey. This information also sheds light on the living conditions of the population.

This chapter presents information on sources of drinking water, sanitation, wealth, ownership of durable goods, and the composition of the household population. It also presents characteristics of the survey respondents such as age, education, and literacy. These socioeconomic characteristics are useful for understanding the factors that affect use of health services and other health behaviours related to malaria control.

2.1 Drinking Water Sources

Improved sources of drinking water

Include piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, rainwater, water delivered via a tanker truck or a cart with a small tank, and bottled water

Sample: Households and de jure population[1]

Access to clean water has been prioritised by national governments as well as international platforms as a key issues to address in the near future. For example, in Uganda, one target of the Fourth National Development Plan (NDP IV) is increasing access to safe water to 80% of households in rural areas and 87% in urban areas by 2030 (National Planning Authority 2024).

Table 2.1 shows that 84% of the households had access to an improved source of drinking water, compared with 17% that did not. Tube wells or boreholes were the most common form of improved drinking water for households (39%), followed by public taps/standpipes (15%).

[1] The household, de jure, and de facto populations are defined in Section 2.8.

Twenty-three percent of households had access to water on the premises, 24% required more than 30 minutes of round-trip travel to collect water, and 54% could obtain drinking water in 30 minutes or less.

The percentage of households using unimproved sources of drinking water was higher in rural areas (13%) than in urban areas (7%).

Trends: The percentage of households with an improved source of drinking water increased from 76% in the 2018–19 UMIS (Uganda National Malaria Control Division et al. 2020) to 84% in the 2024–25 UMIS. The percentage of households that needed more than 30 minutes to obtain water decreased from 30% in the 2018–19 UMIS to 24% in the 2024–25 UMIS.

2.2 Drinking Water Service Ladder

Drinking water service ladder

Safely managed

Drinking water from an improved water source that is located on the premises, available when needed, and free from faecal and priority chemical contamination

Basic

Drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less

Limited

Drinking water from an improved source, with a round-trip collection time of more than 30 minutes

Unimproved

Drinking water from an unprotected dug well or unprotected spring

Surface water

Drinking water directly from a river, dam, lake, pond, stream, canal, or irrigation canal

Sample: De jure population

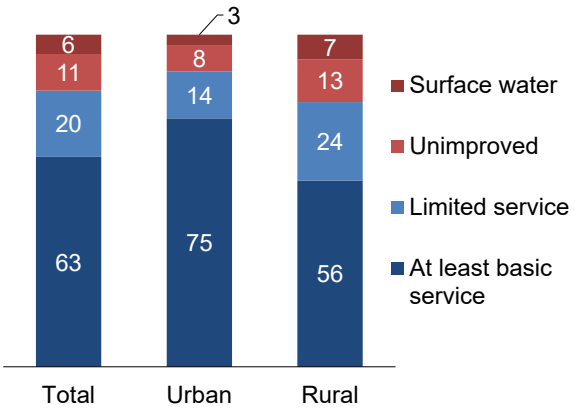
Building off the classification of drinking water sources as improved or unimproved, the Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP) has devised a five-rung drinking water service ladder to benchmark and compare progress towards achieving Sustainable Development Goal (SDG) targets (WHO/UNICEF 2018). The 2024–25 UMIS captured information on four out of the five rungs. Because the survey did not include testing of drinking water for faecal or chemical contamination, safely managed and basic drinking water services could not be distinguished and are grouped together in **Table 2.2** as "at least basic service."

Nationally, 63% of the household population had access to at least basic drinking water services, 20% had limited service, and 11% used unimproved sources. The remaining 6% used surface water for drinking (**Figure 2.1**).

Trends: The percentage of the household population that used an unimproved water source remained steady between the 2014–15 UMIS and the 2018–19 UMIS (23% and 24%, respectively) and declined to 11% in the 2024–25 UMIS.

Figure 2.1 **Household population drinking water service by residence**

Percent distribution of de jure population by drinking water service ladder



Patterns by background characteristics

- Ninety-seven percent of the household population in Kampala had at least basic drinking water service, compared with 39% of the household population in Karamoja.
- Forty-eight percent of the household population in the lowest wealth quintile had at least basic drinking water service, compared with 92% of the household population in the highest wealth quintile.

2.3 SANITATION

Improved toilet facilities

Flush/pour flush toilets that flush water and waste to a piped sewer system, septic tank, pit latrine, or unknown destination; ventilated improved pit latrines; pit latrines with slabs; or composting toilets

Sample: Households and de jure population

Nationally, more than half of households (54%) used an improved toilet facility, and 42% used an unimproved facility. Households in urban areas were more likely to use improved facilities (67%) than were rural households (45%) (**Table 2.3**). The most commonly used improved toilet facility was a pit latrine with a slab (37% of all households). Four percent of households lacked access to any facility and used the bush or a field.

Trends: The percentage of households using improved facilities increased from 44% in the 2018–19 UMIS to 54% in the 2024–25 UMIS. The percentage of households with no facility/bush/field remained steady, at 5% in the 2018–19 UMIS and 4% in the 2024–25 UMIS.

2.4 SANITATION SERVICE LADDER

Sanitation service ladder

Safely managed

Use of improved facilities that are not shared with other households and from which excreta are safely disposed of in situ or transported and treated offsite

Basic

Use of improved facilities that are not shared with other households

Limited

Use of improved facilities shared by two or more households

Unimproved

Use of pit latrines without a slab or platform, hanging latrines, or bucket latrines

Open defaecation

Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches, or other open spaces; or disposal with solid waste

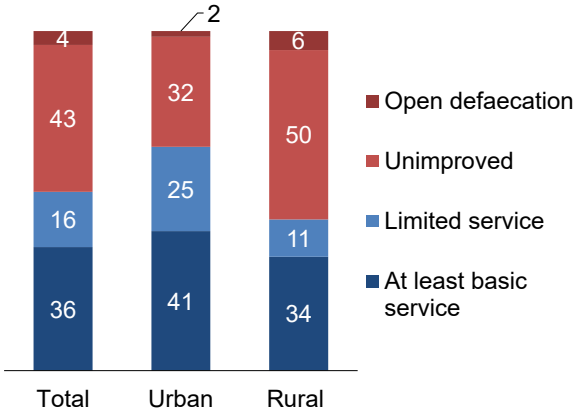
Sample: De jure population

The JMP has also devised a five-rung sanitation service ladder to benchmark and compare progress towards achieving SDG targets related to sanitation. The 2024–25 UMIS captured information about four out of the five rungs but could not distinguish between safely managed and basic sanitation services. For this reason, safely managed and basic sanitation services are grouped together in **Table 2.4** as "at least basic service."

Nationally, 36% of the population had access to at least basic sanitation services. Sixteen percent of the population used limited service, 43% had unimproved sanitation, and 4% practiced open defaecation (**Figure 2.2**).

Figure 2.2 **Household population sanitation service by residence**

Percent distribution of de jure population by sanitation service ladder



Trends: The household population's access to basic sanitation service increased from 18% in the 2014–15 UMIS to 30% in the 2018–19 UMIS, and to 36% in the 2024–25 UMIS.

Patterns by background characteristics

- In Karamoja, 64% of the household population practiced open defaecation; in all other subregions, 9% or less of the household population practiced open defaecation.
- In the lowest quintile, 11% of the household population had access to at least basic sanitation services; coverage increased with wealth, to 59% of the household population in the highest wealth quintile.

2.5 Housing Characteristics

The 2024–25 UMIS collected data on household features such as access to electricity, construction materials, and number of rooms used for sleeping. The responses to these questions, along with information on ownership of household durable goods, contribute to the creation of the household wealth index and provide information that may be relevant for other health indicators.

Cement was the most common flooring material in Uganda, used by 40% of all households. Urban households were more likely to have floors made of cement (55%) than were rural households (30%). Earth/sand was the second most common flooring material, used by 39% of all households. Earth/sand floors were more common in rural households (48%) than in urban households (25%) (**Table 2.5**).

Eighty percent of households had iron sheets as the roofing material. Urban households (89%) were more likely than rural households (73%) to have roofs with iron sheets. The next most common material used for roofing was thatch/palm, used by 19% of households (26% of rural households and 10% of urban households).

The number of rooms a household uses for sleeping is an indicator of socioeconomic level and of crowding in the household, which can facilitate the spread of disease. Thirty-one percent of households used three or more rooms for sleeping, 30% used two rooms, and 39% used only one room. Slight urban-rural differences existed in the number of rooms used for sleeping, as 37% of rural households used one room for sleeping compared with 43% of households in urban areas (**Table 2.5**).

Overall, 43% of households in Uganda had access to electricity (61% of urban households and only 31% of rural households) (**Table 2.6**).

2.6 Use of Clean Fuels and Technologies for Cooking

Primary reliance on clean fuels and technologies

The percentage of the population using clean fuels and technologies for cooking, with clean cooking fuels and technologies defined as follows: stoves/cookers using electricity, liquefied petroleum gas (LPG)/natural gas/biogas, solar, or alcohol/ethanol

Sample: Households and de jure population

Exposure to cooking smoke, especially to smoke produced from solid fuels, is potentially harmful to health. Ninety-seven percent of households used solid fuel for cooking, mainly charcoal (30%) and firewood (67%) (**Table 2.6**). One percent of households used clean fuel and technologies for cooking (3% of urban households and less than 1% of rural households).

2.7 Household Wealth

2.7.1 Household Durable Goods

Data from the 2024–25 UMIS provided information on ownership of household effects, means of transport, agricultural land, and bank accounts. Urban households were more likely than rural households to own a radio (59% versus 51%), a television (45% versus 18%), a mobile telephone (91% versus 81%), or a motorcycle/scooter (15% versus 13%). Urban households were also more likely to own a car/truck (6% versus 3%). In contrast, rural households were more likely than urban households to own agricultural land (67% versus 42%) and farm animals (66% versus 44%) (**Table 2.7**).

2.7.2 Wealth Index

Wealth index

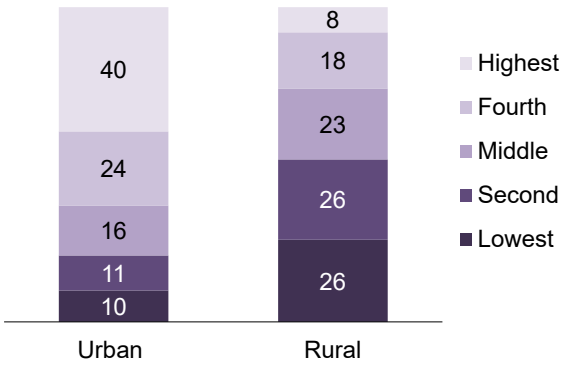
Households are given scores based on the number and kinds of consumer goods they own, ranging from a television to a bicycle or car, and housing characteristics such as source of drinking water, toilet facilities, and flooring materials. These scores are derived using principal component analysis. National wealth quintiles are compiled by assigning the household score to each usual (de jure) household member, ranking each person in the household population by her or his score, and then dividing the distribution into five equal categories, each comprising 20% of the population.

Sample: Households

By definition, 20% of the total household population was in each wealth quintile. However, the population distributions were unequal when stratified by urban and rural areas. Forty percent of the population in urban areas was in the highest quintile compared with only 8% of the population in rural areas. Conversely, only 10% of the urban population fell in the lowest wealth quintile, compared with 26% of the rural population (**Table 2.8** and **Figure 2.3**).

Figure 2.3 **Household wealth by residence**

Percent distribution of de jure population by wealth quintiles



2.8 Household Population and Composition

Household

A person or group of related or unrelated persons who live together in the same dwelling unit(s), who acknowledge one adult male or female as the head of the household, who share the same housekeeping arrangements, and who are considered a single unit

De facto population

All persons who stayed in the selected households the night before the interview (whether usual residents or visitors)

De jure population

All persons who are usual residents of the selected households, whether or not they stayed in the household the night before the interview

How data are calculated

All tables are based on the de facto population unless otherwise specified.

In the 2024–25 UMIS, 44,191 persons stayed overnight in 9,458 households. The overall sex ratio was 93 male individuals per 100 female individuals, and the majority of the population (62%) lived in rural areas (**Table 2.9**).

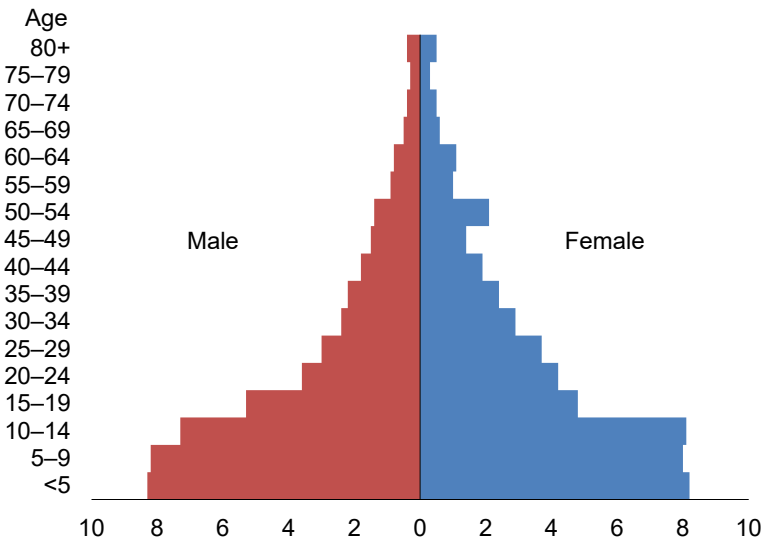
Trends: The proportion of the population in rural areas decreased from 76% in the 2018–19 UMIS to 62% in the 2024–25 UMIS. This is mainly due to the creation of new cities and town councils after the 2018–19 UMIS.

Age and sex are important demographic variables that serve as the primary basis of demographic classification. **Table 2.9** shows the distribution of the de facto household population in the 2024–25 UMIS by 5-year age groups, according to sex and residence.

The population pyramid in **Figure 2.4** shows the population distribution by sex and 5-year age groups. The broad base of the pyramid shows that Uganda's population is young, which is typical of developing countries with a high fertility rate and low life expectancy. Just under half of the population (48%) was under age 15, 48% were age 15–64, and only 4% were age 65 and older (**Table 2.9**).

Figure 2.4 **Population pyramid**

Percent distribution of the household population



On average, households in Uganda consisted of 4.7 persons (**Table 2.10**). Seventy percent of households in Uganda were headed by men. The percentage of households headed by women was higher in urban areas than in rural areas (32% versus 28%).

2.9 Basic Characteristics of Survey Respondents

Basic characteristics of survey respondents are shown in **Table 2.11**. Catholics were the largest religious group (36% of respondents). The Baganda were the largest ethnic group (19%), followed by the Banyankore (12%). A majority of respondents lived in rural areas (59%), with North and South Buganda containing the largest proportions of respondents (19% and 11%, respectively). In terms of malaria intervention areas, 11% of respondents lived in indoor residual spraying (IRS) districts, 3% lived in seasonal malaria chemoprevention (SMC) districts, and 8% lived in high altitude districts.

2.10 Educational Attainment

Studies have consistently shown that educational attainment has a strong effect on health behaviours and attitudes. Generally, the higher the level of education a woman has attained, the more knowledgeable she is about both health management and the use of health facilities for herself and her children.

Table 2.12 shows the percent distribution of women age 15–49 by highest level of schooling attended or completed, and median years completed, according to background characteristics. The results show that 9% of women age 15–49 had no education, and only 7% had more than secondary education. The median years of schooling completed by women was 6.4 years.

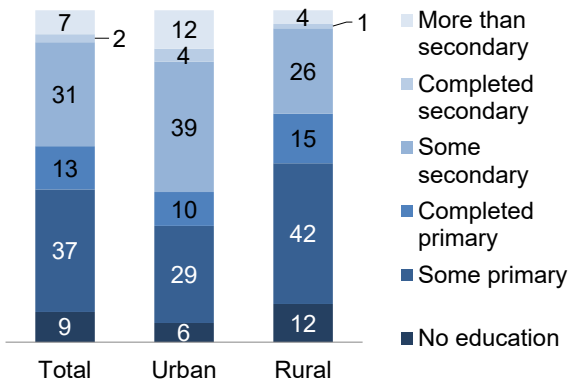
Trends: The percentage of women with no education decreased from 12% in the 2018–19 UMIS to 9% in the 2024–25 UMIS, and the percentage of women who have at least some secondary education increased from 36% in the 2018–19 UMIS to 41% in the 2024–25 UMIS.

Patterns by background characteristics

- The percentage of women with no education ranged from 3% in Elgon to 65% in Karamoja (**Table 2.12**).
- The percentage of women with more than secondary education was higher in urban areas (12%) than in rural areas (4%) (**Figure 2.5**).
- The percentage of women with no schooling increased with age, from 4% among women age 15–19 to roughly 20% among women age 40–49.

Figure 2.5 **Education of survey respondents by residence**

Percent distribution of women age 15–49 by highest level of schooling attended or completed



2.11 Literacy

Literacy

Respondents who had attended higher than secondary school were assumed to be literate. All other respondents were considered literate if they could read aloud all or part of a sentence shown to them.

Sample: Women age 15–49

Knowing the level and distribution of literacy among the population is an important factor in the design and delivery of health messages and interventions. The 2024–25 UMIS results showed that, overall, 77% of women age 15–49 in Uganda were literate (**Table 2.13**).

Trends: The literacy rate for women age 15–49 increased from 70% in the 2018–19 UMIS to 77% in the 2024–25 UMIS.

Patterns by background characteristics

- Younger women were more likely to be literate than older women. The literacy rate was 85% for women age 15–19 and 61% for those age 45–49.
- Urban women had a higher literacy rate (85%) than their rural counterparts (71%).
- The literacy rate in the highest wealth quintile was 95%, compared with 50% in the lowest wealth quintile.
- Women from Ankole and South Buganda had the highest literacy rate (91%), while women from Karamoja had the lowest (24%).

2.12 Mass Media Exposure

Exposure to mass media

Respondents were asked how often they read a newspaper, listened to the radio, or watched television. Those who responded *at least once a week* were considered regularly exposed to that form of media.

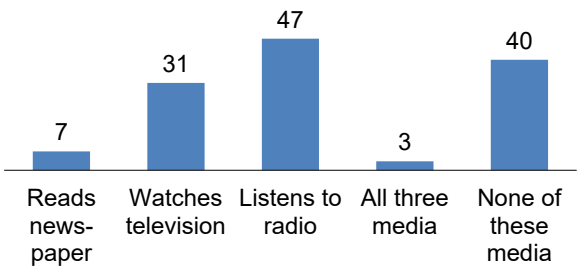
Sample: Women age 15–49

Exposure to mass media facilitates the flow of information to all persons in a society and can help them understand what is being relayed in the different media. If any health-related information is shown in these media, women can use it for behavioural change.

As shown in **Table 2.14** and **Figure 2.6**, 7% of women age 15–49 read a newspaper at least once a week, 31% watched television at least once a week, and 47% listened to the radio at least once a week. Only 3% of women read a newspaper, watched television, *and* listened to a radio at least once a week. Forty percent of women accessed none of these three media on a weekly basis.

Figure 2.6 **Exposure to mass media**

Percentage of women age 15–49 who are exposed to media on a weekly basis



Patterns by background characteristics

- Women in the highest wealth quintile were more likely to read a newspaper at least once a week (16%) than were those in the lowest quintile (1%).
- Urban women were almost twice as likely as rural women to read a newspaper at least once a week (9% versus 5%).
- The highest percentage of women reporting watching television was from Kampala (74%), while the lowest percentage was from Teso (7%).
- Sixty-two percent of women with more than secondary education reported watching television at least once a week compared with only 12% of those with no education.
- Lango had the highest percentage of women who listened to a radio at least once a week (62%), while Teso had the lowest (25%).

2.13 Mobile Phone Ownership and Internet Usage

Use of the internet

Respondents were asked if they had ever used the internet from any device; if they used the internet in the past 12 months; and, if they used the internet in the past 12 months, how often they used it during the past month.

Sample: Women age 15–49

The internet is widely used, as it connects people and devices globally, enabling the sharing of data and resources for personal, professional, and societal advancement. Sixty-two percent of women owned any mobile phone, while 22% owned a smart phone. Twenty-seven percent of women had ever used the internet, and 25% had used the internet in the past 12 months. Among respondents who had used the internet in the past 12 months, 53% used it every day and 31% used it at least once a week (**Table 2.15**).

Patterns by background characteristics

- Women in urban areas were more likely than those in rural areas to own phones. Seventy-two percent of women in urban areas owned any mobile phone, compared with 54% of women in rural areas.
- Kampala had the highest percentage of women owning smart phones (62%), while Karamoja had the lowest (4%).
- Women in the highest wealth quintile (63%) and those with more than secondary education (80%) were more likely to have ever used the internet than were those in the lowest wealth quintile (2%) and those with no education (3%). A similar pattern was seen for those who used the internet in the past 12 months.
- Among women who had used the internet in the past 12 months, Kampala had the highest percentage of women (71%) who used the internet almost every day, while Kigezi (42%) and Busoga (43%) had the lowest rates of daily use.

List of Tables

For detailed information on the household population, housing characteristics, and respondent characteristics, see the following tables:

- **Table 2.1 Household drinking water**
- **Table 2.2 Drinking water service ladder**
- **Table 2.3 Household sanitation facilities**
- **Table 2.4 Sanitation service ladder**
- **Table 2.5 Household characteristics**
- **Table 2.6 Household characteristics: Electricity, cooking technology, and cooking fuel**
- **Table 2.7 Household possessions**
- **Table 2.8 Wealth quintiles**
- **Table 2.9 Household population by age, sex, and residence**
- **Table 2.10 Household composition**
- **Table 2.11 Background characteristics of respondents**
- **Table 2.12 Educational attainment**
- **Table 2.13 Literacy**
- **Table 2.14 Exposure to mass media: Women**
- **Table 2.15 Internet usage: Women**

Table 2.1 Household drinking water

Percent distribution of households and de jure population by source of drinking water and by time to obtain drinking water, according to residence, Uganda MIS 2024–25

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	**90.1**	**79.1**	**83.6**	**88.9**	**79.7**	**83.2**
Piped into dwelling/yard/plot	15.3	3.0	7.9	14.9	2.9	7.5
Piped to neighbour	9.1	2.0	4.8	7.3	1.7	3.9
Public tap/standpipe	22.1	9.8	14.7	19.8	8.9	13.1
Tube well or borehole	27.7	47.0	39.3	30.5	49.3	42.2
Protected dug well	6.4	5.0	5.6	6.9	4.9	5.6
Protected spring	4.3	8.9	7.1	4.8	9.2	7.5
Rainwater	2.6	1.9	2.2	2.8	1.7	2.1
Tanker truck/cart with small tank	0.9	1.0	0.9	0.7	0.9	0.8
Bottled water	1.7	0.5	1.0	1.3	0.2	0.6
Unimproved source	**7.1**	**13.1**	**10.7**	**8.0**	**12.9**	**11.0**
Unprotected dug well	5.5	9.1	7.6	6.0	8.9	7.8
Unprotected spring	1.4	3.5	2.6	1.8	3.5	2.8
Other	0.2	0.5	0.4	0.2	0.5	0.4
Surface water	**2.7**	**7.8**	**5.8**	**3.1**	**7.4**	**5.8**
Total	100.0	100.0	100.0	100.0	100.0	100.0
Time to obtain drinking water (round-trip)						
Water on premises[1]	38.3	11.8	22.5	35.6	11.1	20.4
30 minutes or less	45.1	59.5	53.8	45.5	58.1	53.3
More than 30 minutes	16.5	28.6	23.7	18.8	30.8	26.2
Don't know	0.1	0.0	0.0	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population	3,792	5,666	9,458	17,010	27,769	44,779

[1] Includes water piped to a neighbour and those reporting a round-trip collection time of zero minutes

Table 2.2 Drinking water service ladder

Percent distribution of de jure population by drinking water service ladder, according to background characteristics, Uganda MIS 2024–25

Background characteristic	At least basic service[1]	Limited service[2]	Unimproved[3]	Surface water	Total	Number of persons
Residence						
Urban	74.8	14.1	8.0	3.1	100.0	17,010
Rural	56.1	23.6	12.9	7.4	100.0	27,769
Subregion						
Kampala	96.6	1.4	1.7	0.3	100.0	1,024
Buganda	68.6	13.1	9.4	8.9	100.0	12,422
South Buganda	73.6	7.2	11.1	8.0	100.0	7,243
North Buganda	61.6	21.4	6.9	10.1	100.0	5,178
Busoga	72.7	22.4	3.5	1.3	100.0	3,841
Bukedi	65.0	28.3	5.6	1.2	100.0	2,610
Elgon	66.5	27.2	5.5	0.8	100.0	2,114
Teso	51.5	44.2	3.5	0.7	100.0	2,462
Lango	61.9	32.1	6.0	0.0	100.0	2,472
Acholi	58.5	20.2	19.1	2.2	100.0	1,966
Karamoja	38.5	36.2	8.3	16.9	100.0	1,438
West Nile	62.5	23.4	6.7	7.3	100.0	2,952
Bunyoro	55.8	24.1	12.7	7.4	100.0	3,003
Toro	59.1	9.7	24.5	6.7	100.0	3,185
Ankole	59.0	8.5	29.5	2.9	100.0	3,541
Kigezi	51.7	17.7	12.3	18.4	100.0	1,750
Wealth quintile						
Lowest	47.6	30.2	14.4	7.8	100.0	8,954
Second	51.7	24.4	16.3	7.6	100.0	8,964
Middle	56.1	23.2	13.3	7.4	100.0	8,948
Fourth	68.3	17.7	9.1	4.9	100.0	8,955
Highest	92.3	4.5	1.9	1.3	100.0	8,958
Total	63.2	20.0	11.0	5.8	100.0	44,779

Note: Service ladder concept/definitions based on the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP).
[1] Defined as drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less; includes safely managed drinking water, which is not shown separately
[2] Drinking water from an improved source, provided round-trip collection time is more than 30 minutes or is unknown
[3] Drinking water from an unprotected dug well or unprotected spring

Table 2.3 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities and percent distribution of households and de jure population with a toilet/latrine facility by location of the facility, according to residence, Uganda MIS 2024–25

	Households			Population		
Type and location of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved sanitation facility	**67.3**	**44.9**	**53.9**	**66.0**	**44.5**	**52.7**
Flush/pour flush to piped sewer system	1.2	0.1	0.5	1.1	0.0	0.4
Flush/pour flush to septic tank	6.8	1.1	3.3	6.2	0.9	2.9
Flush/pour flush to pit latrine	3.2	0.6	1.6	2.9	0.7	1.5
Flush/pour flush, don't know where	0.1	0.0	0.0	0.0	0.0	0.0
Ventilated improved pit latrine	16.5	8.4	11.6	16.1	8.9	11.6
Pit latrine with slab	39.5	34.4	36.5	39.6	33.8	36.0
Composting toilet	0.1	0.3	0.2	0.1	0.2	0.2
Unimproved sanitation facility	**31.1**	**49.3**	**42.0**	**32.4**	**49.9**	**43.3**
Flush/pour flush not to sewer/septic tank/pit latrine	0.2	0.0	0.1	0.2	0.0	0.1
Pit latrine without slab/open pit	30.5	48.4	41.3	32.0	49.2	42.7
Bucket	0.1	0.1	0.1	0.1	0.1	0.1
Hanging toilet/hanging latrine	0.2	0.5	0.4	0.2	0.5	0.4
Other	0.1	0.2	0.1	0.0	0.2	0.1
Open defaecation (no facility/bush/field)	**1.6**	**5.9**	**4.2**	**1.7**	**5.6**	**4.1**
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population	3,792	5,666	9,458	17,010	27,769	44,779
Location of toilet facility						
In own dwelling	9.2	2.9	5.5	8.6	2.9	5.1
In own yard/plot	83.6	87.3	85.8	85.2	89.3	87.7
Elsewhere	7.2	9.8	8.7	6.1	7.7	7.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population with a toilet/latrine facility	3,730	5,333	9,063	16,728	26,224	42,952

Table 2.4 Sanitation service ladder

Percent distribution of de jure population by type of sanitation service, according to background characteristics, Uganda MIS 2024–25

Background characteristic	At least basic service[1]	Limited service[2]	Unimproved[3]	Open defaecation	Total	Number of persons
Residence						
Urban	41.1	24.8	32.4	1.7	100.0	17,010
Rural	33.5	11.0	49.9	5.6	100.0	27,769
Subregion						
Kampala	38.2	46.9	14.9	0.0	100.0	1,024
Buganda	55.1	21.7	22.9	0.3	100.0	12,422
South Buganda	56.5	27.4	16.0	0.1	100.0	7,243
North Buganda	53.3	13.6	32.4	0.7	100.0	5,178
Busoga	33.9	13.5	49.0	3.5	100.0	3,841
Bukedi	18.2	7.9	69.0	4.9	100.0	2,610
Elgon	12.5	3.6	81.7	2.2	100.0	2,114
Teso	13.1	11.7	65.4	9.8	100.0	2,462
Lango	44.9	19.8	32.7	2.6	100.0	2,472
Acholi	18.3	19.7	52.9	9.1	100.0	1,966
Karamoja	6.7	10.4	18.7	64.2	100.0	1,438
West Nile	16.8	13.2	69.0	1.0	100.0	2,952
Bunyoro	50.1	25.7	23.4	0.7	100.0	3,003
Toro	40.2	9.2	50.3	0.4	100.0	3,185
Ankole	42.0	12.2	45.7	0.0	100.0	3,541
Kigezi	20.0	6.7	73.2	0.1	100.0	1,750
Wealth quintile						
Lowest	10.7	8.1	63.5	17.7	100.0	9,361
Second	23.1	8.6	66.6	1.7	100.0	6,717
Middle	39.8	13.4	46.1	0.6	100.0	9,566
Fourth	49.7	21.4	28.5	0.4	100.0	9,569
Highest	58.5	29.9	11.6	0.0	100.0	9,565
Total	36.4	16.3	43.3	4.1	100.0	44,779

Note: Service ladder concept/definitions based on the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP).

[1] Defined as use of improved facilities that are not shared with other households; includes safely managed sanitation service, which is not shown separately

[2] Defined as use of improved facilities shared by two or more households

[3] Use of flush/pour flush toilet not to sewer, septic tank, or pit latrine; pit latrine without a slab/open pit; hanging toilet/latrine; or bucket

Table 2.5 Household characteristics

Percent distribution of households and de jure population by housing characteristics and percent distribution by frequency of smoking in the home, according to residence, Uganda MIS 2024–25

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Flooring material						
Earth/sand	24.6	48.4	38.8	25.4	48.0	39.4
Dung	6.0	17.2	12.7	6.4	17.9	13.6
Wood planks	0.0	0.1	0.1	0.0	0.0	0.0
Palm/bamboo	0.0	0.0	0.0	0.0	0.0	0.0
Parquet or polished wood	0.0	0.0	0.0	0.0	0.0	0.0
Ceramic tiles	10.2	2.4	5.5	10.4	2.6	5.5
Cement	55.1	30.1	40.1	54.1	29.6	38.9
Carpet	1.7	0.6	1.0	1.1	0.5	0.8
Stones	1.2	0.7	0.9	1.4	0.7	1.0
Bricks	0.6	0.3	0.4	0.7	0.2	0.4
Other	0.5	0.4	0.5	0.4	0.4	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Roof material						
No roof	0.0	0.1	0.1	0.0	0.1	0.1
Thatch/palm leaf	9.5	25.9	19.3	10.9	26.2	20.3
Mud	0.1	0.1	0.1	0.1	0.1	0.1
Rustic mat	0.0	0.3	0.2	0.0	0.2	0.2
Palm/bamboo	0.1	0.0	0.1	0.1	0.0	0.1
Wood planks	0.0	0.0	0.0	0.0	0.0	0.0
Iron sheets	89.4	73.0	79.6	88.1	72.9	78.7
Wood	0.1	0.0	0.0	0.0	0.0	0.0
Asbestos	0.1	0.0	0.0	0.1	0.0	0.0
Ceramic tiles	0.1	0.0	0.0	0.1	0.0	0.0
Other[1]	0.6	0.5	0.6	0.6	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Outside wall material						
No walls	0.0	0.0	0.0	0.0	0.0	0.0
Thatched/straw	0.2	0.6	0.4	0.2	0.5	0.4
Dirt	1.3	5.0	3.5	1.3	4.9	3.5
Poles with mud	13.3	26.1	21.0	13.8	25.4	21.0
Stone with mud	0.4	0.4	0.4	0.2	0.3	0.3
Unburnt bricks with mud	6.8	14.4	11.3	7.5	15.1	12.2
Plywood	0.2	0.2	0.2	0.1	0.1	0.1
Cardboard	0.0	0.1	0.1	0.0	0.1	0.0
Reused wood	0.3	0.3	0.3	0.2	0.2	0.2
Unburnt bricks with plaster	3.9	3.0	3.3	3.6	2.6	3.0
Burnt bricks with mud	5.2	10.0	8.1	5.5	9.9	8.2
Cement	19.2	6.9	11.8	18.0	6.6	10.9
Stone with lime/cement	3.0	1.8	2.3	2.7	1.7	2.0
Burnt bricks with cement	43.9	28.8	34.9	44.3	30.5	35.8
Cement blocks	0.4	0.2	0.3	0.4	0.2	0.3
Unburnt bricks with cement	0.6	0.7	0.6	0.8	0.6	0.7
Wood planks/shingles	0.1	0.6	0.4	0.0	0.4	0.3
Other	1.4	0.9	1.1	1.4	1.0	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	43.4	36.6	39.3	29.2	24.0	25.9
Two	27.3	31.4	29.7	29.9	32.5	31.5
Three or more	29.3	32.0	30.9	40.9	43.5	42.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/ population	3,792	5,666	9,458	17,010	27,769	44,779

[1] Includes tin, cement, tarpaulin, and roofing shingles, which are usually shown separately but were classified together due to a programming error

Table 2.6 Household characteristics: Electricity, cooking technology, and cooking fuel

Percent distribution of households and de jure population by access to electricity, cooking technology, and cooking fuel, according to residence, Uganda MIS 2024–25

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	60.9	31.4	43.2	59.6	32.5	42.8
No	39.1	68.6	56.8	40.4	67.5	57.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Main cooking technology						
Clean fuels and technologies	**2.9**	**0.4**	**1.4**	**2.0**	**0.2**	**0.9**
Electric stove	0.4	0.1	0.2	0.3	0.1	0.2
LPG/natural gas stove	1.7	0.2	0.8	1.3	0.0	0.5
Piped natural gas stove	0.3	0.0	0.1	0.2	0.0	0.1
Biogas stove	0.5	0.1	0.3	0.2	0.1	0.1
Other fuels and technologies	**94.9**	**98.6**	**97.1**	**97.4**	**99.6**	**98.7**
Liquid fuel stove not using alcohol/ ethanol	0.1	0.1	0.1	0.0	0.0	0.0
Manufactured solid fuel stove	34.5	10.8	20.3	30.8	8.2	16.8
Traditional solid fuel stove	18.9	14.6	16.3	19.1	13.7	15.8
Three stone stove/open fire	40.7	72.9	60.0	47.1	77.5	66.0
Other	0.7	0.2	0.4	0.4	0.1	0.2
No food cooked in household	**2.1**	**1.0**	**1.4**	**0.6**	**0.3**	**0.4**
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
Clean fuels and technologies[1]	**2.9**	**0.4**	**1.4**	**2.0**	**0.2**	**0.9**
Solid fuels for cooking	**94.7**	**98.5**	**97.0**	**97.3**	**99.5**	**98.7**
Charcoal	49.3	16.2	29.5	44.6	12.5	24.7
Wood	44.9	81.1	66.6	52.0	85.7	72.9
Straw/shrubs/grass	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural crop	0.0	0.0	0.0	0.0	0.0	0.0
Processed biomass (pellets) or woodchips	0.5	1.1	0.9	0.7	1.2	1.0
Sawdust	0.0	0.0	0.0	0.0	0.0	0.0
Other fuels	**0.3**	**0.1**	**0.2**	**0.1**	**0.0**	**0.1**
Gasoline/diesel	0.1	0.0	0.0	0.0	0.0	0.0
Kerosene/paraffin	0.1	0.1	0.1	0.0	0.0	0.0
Other	0.1	0.0	0.1	0.1	0.0	0.0
No food cooked in household	2.1	1.0	1.4	0.6	0.3	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population	3,792	5,666	9,458	17,010	27,769	44,779

LPG = liquefied petroleum gas
[1] Includes stoves/cookers using electricity, LPG/natural gas/biogas, solar, and alcohol/ethanol

Table 2.7 Household possessions

Percentage of households possessing various household effects, means of transportation, agricultural land, and livestock/farm animals, according to residence, Uganda MIS 2024–25

Possession	Residence		Total
	Urban	Rural	
Household effects			
Radio	58.5	50.5	53.7
Television	44.9	17.6	28.6
Mobile phone	91.4	81.3	85.3
Non-mobile telephone	3.1	1.5	2.1
Computer	7.4	1.9	4.1
Refrigerator	13.7	3.4	7.5
Cassette/CD/DVD player	9.0	3.2	5.5
Table	72.2	68.8	70.2
Chair	82.3	83.7	83.1
Sofa set	37.5	18.7	26.2
Bed	84.3	75.1	78.8
Cupboard	32.3	19.4	24.6
Clock	12.2	4.9	7.8
Watch	32.9	16.9	23.3
Means of transportation			
Bicycle	21.0	25.3	23.6
Animal drawn cart	1.0	0.8	0.9
Motorcycle/scooter	14.7	12.7	13.5
Car/truck	6.3	2.5	4.0
Boat with a motor	0.9	1.2	1.1
Boat without a motor	0.9	1.0	1.0
Ownership of agricultural land	42.3	66.8	57.0
Ownership of farm animals[1]	43.5	65.5	56.7
Number of households	3,792	5,666	9,458

[1] Cows, bulls, other cattle, horses, donkeys, goats, sheep, chickens, or other poultry

Table 2.8 Wealth quintiles

Percent distribution of de jure population by wealth quintile, and the Gini coefficient, according to residence and subregion, Uganda MIS 2024–25

Residence/region	Wealth quintile					Total	Number of persons	Gini coefficient[1]
	Lowest	Second	Middle	Fourth	Highest			
Residence								
Urban	10.0	11.1	15.9	23.5	39.5	100.0	17,010	0.26
Rural	26.1	25.5	22.5	17.8	8.0	100.0	27,769	0.32
Subregion								
Kampala	0.0	0.0	1.1	12.8	86.0	100.0	1,024	0.10
Buganda	4.0	9.8	18.4	28.9	38.9	100.0	12,422	0.25
South Buganda	3.0	6.4	13.3	24.7	52.6	100.0	7,243	0.20
North Buganda	5.3	14.6	25.4	34.8	19.9	100.0	5,178	0.26
Busoga	10.0	24.9	27.6	23.9	13.6	100.0	3,841	0.31
Bukedi	21.4	24.9	26.7	19.5	7.4	100.0	2,610	0.31
Elgon	7.5	46.9	23.2	15.0	7.4	100.0	2,114	0.25
Teso	54.9	18.3	13.5	8.8	4.5	100.0	2,462	0.41
Lango	45.8	19.2	16.7	12.9	5.4	100.0	2,472	0.28
Acholi	56.2	16.7	6.3	8.2	12.6	100.0	1,966	0.46
Karamoja	84.6	4.6	2.9	4.4	3.4	100.0	1,438	0.43
West Nile	48.9	18.8	12.7	9.0	10.6	100.0	2,952	0.34
Bunyoro	18.9	25.4	29.2	19.5	7.2	100.0	3,003	0.27
Toro	10.5	36.7	26.7	17.7	8.3	100.0	3,185	0.35
Ankole	3.7	21.5	22.6	28.7	23.5	100.0	3,541	0.28
Kigezi	4.5	33.1	33.7	17.0	11.7	100.0	1,750	0.36
Total	20.0	20.0	20.0	20.0	20.0	100.0	44,779	0.33

[1] The Gini coefficient indicates the level of concentration of wealth, with 0 representing an equal wealth distribution and 1 representing a totally unequal distribution.

Table 2.9 Household population by age, sex, and residence

Percent distribution of de facto household population by age groups, according to sex and residence, Uganda MIS 2024–25

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	17.2	14.6	15.8	17.3	16.5	16.9	17.3	15.8	16.5
5–9	16.2	15.0	15.6	17.4	15.7	16.5	16.9	15.5	16.2
10–14	14.3	14.6	14.4	15.5	16.3	15.9	15.1	15.6	15.4
15–19	10.9	9.4	10.1	11.0	9.2	10.0	10.9	9.3	10.1
20–24	7.5	8.9	8.2	7.3	7.8	7.5	7.4	8.2	7.8
25–29	6.7	8.2	7.5	5.9	6.4	6.2	6.2	7.1	6.7
30–34	5.1	6.0	5.6	4.9	5.2	5.0	5.0	5.5	5.3
35–39	5.3	5.1	5.2	4.1	4.5	4.3	4.5	4.7	4.6
40–44	4.1	3.9	4.0	3.4	3.6	3.5	3.7	3.7	3.7
45–49	3.1	2.7	2.9	3.1	2.8	2.9	3.1	2.8	2.9
50–54	3.0	4.3	3.7	2.8	3.8	3.3	2.9	4.0	3.5
55–59	1.9	1.7	1.8	1.9	2.1	2.0	1.9	1.9	1.9
60–64	1.4	1.8	1.6	1.9	2.2	2.1	1.7	2.0	1.9
65–69	1.1	1.1	1.1	1.1	1.3	1.2	1.1	1.2	1.2
70–74	0.8	0.9	0.9	0.8	1.0	0.9	0.8	1.0	0.9
75–79	0.5	0.8	0.6	0.6	0.6	0.6	0.6	0.7	0.6
80+	0.7	0.9	0.8	0.8	1.1	1.0	0.7	1.0	0.9
Don't know/missing	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dependency age groups									
0–14	47.7	44.2	45.9	50.2	48.5	49.4	49.3	46.9	48.0
15–64	49.2	52.1	50.7	46.3	47.4	46.9	47.4	49.2	48.3
65+	3.0	3.7	3.4	3.4	4.0	3.7	3.2	3.9	3.6
Don't know/missing	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Child and adult populations									
0–17	54.8	49.4	52.0	57.3	53.9	55.5	56.4	52.2	54.2
18+	45.0	50.5	47.9	42.6	46.1	44.4	43.5	47.8	45.7
Don't know/missing	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Adolescents (10–19)	25.1	24.0	24.6	26.5	25.5	26.0	26.0	24.9	25.4
Number of persons	7,946	8,852	16,798	13,323	14,069	27,393	21,269	22,922	44,191

Table 2.10 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of households; and percentage of households with orphans and children under age 18 not living with a biological parent, according to residence, Uganda MIS 2024–25

	Residence		
Characteristic	Urban	Rural	Total
Household headship			
Male	67.7	71.7	70.1
Female	32.3	28.3	29.9
Total	100.0	100.0	100.0
Number of usual members			
0	0.1	0.0	0.0
1	13.3	10.8	11.8
2	12.7	9.9	11.0
3	14.7	13.3	13.9
4	14.6	14.5	14.6
5	13.8	13.8	13.8
6	10.7	12.0	11.5
7	7.6	8.8	8.3
8	5.2	6.4	5.9
9+	7.4	10.5	9.3
Total	100.0	100.0	100.0
Mean size of households	4.5	4.9	4.7
Number of households	3,792	5,666	9,458

Note: Table is based on de jure household members (that is, usual residents).

Table 2.11 Background characteristics of respondents

Percent distribution and number of women age 15–49, according to selected background characteristics, Uganda MIS 2024–25

Background characteristic	Weighted percentage	Weighted number	Unweighted number
Age			
15–19	22.2	2,047	2,032
20–24	19.9	1,838	1,879
25–29	17.0	1,574	1,590
30–34	13.6	1,260	1,248
35–39	11.5	1,060	1,072
40–44	9.1	843	826
45–49	6.7	616	591
Religion			
Anglican	29.8	2,755	2,761
Catholic	35.5	3,277	3,438
Muslim	13.2	1,216	1,084
Seventh Day Adventist	2.2	207	185
Pentecostal/born again/ evangelical	17.2	1,591	1,579
No religion	0.1	7	7
Other	2.0	185	184
Ethnic group			
Baganda	18.5	1,713	1,121
Banyankore	12.4	1,141	878
Iteso	6.7	622	732
Bakiga	6.6	609	701
Lango	6.1	564	687
Bagisu	4.7	434	587
Acholi	4.0	374	553
Basoga	6.4	590	503
Alur	3.3	303	323
Lugbara	3.0	279	310
Banyoro	3.2	293	294
Bakorizo	3.1	289	263
Batoro	2.6	244	238
Bafumbira	1.7	160	179
Bagwere	1.7	159	170
Karimojong	0.9	79	152
Basamia	1.7	153	141
Jopadhola	1.4	126	129
Banyarwanda	2.0	188	123
Banyole	1.1	104	110
Kumam	1.0	89	110
Other	7.9	727	934
Residence			
Urban	41.4	3,827	3,946
Rural	58.6	5,411	5,292
Subregion			
Kampala	3.0	279	636
Buganda	30.0	2,772	1,409
South Buganda	18.9	1,748	790
North Buganda	11.1	1,024	619
Busoga	7.9	728	608
Bukedi	5.4	503	605
Elgon	4.2	386	578
Teso	5.2	481	608
Lango	5.8	538	649
Acholi	4.0	368	557
Karamoja	2.8	259	531
West Nile	6.6	607	676
Bunyoro	6.6	610	690
Toro	6.8	625	591
Ankole	7.8	724	575
Kigezi	3.9	361	525
Special areas			
IRS districts[1]	10.8	1,000	1,112
SMC districts[2]	2.8	259	531
High altitude districts[3]	7.6	699	1,024
Education			
No education	9.1	842	1,013
Primary	50.0	4,616	4,721
Secondary	33.7	3,115	2,873
More than secondary	7.2	664	631

Continued…

Table 2.11—*Continued*

Background characteristic	Weighted percentage	Weighted number	Unweighted number
Wealth quintile			
Lowest	18.6	1,719	2,130
Second	17.6	1,625	1,697
Middle	18.1	1,669	1,609
Fourth	21.3	1,972	1,731
Highest	24.4	2,253	2,071
Total 15–49	100.0	9,238	9,238

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo; Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 2.12 Educational attainment

Percent distribution of women age 15–49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15–24	4.7	34.5	15.0	39.2	2.6	4.0	100.0	6.7	3,885
15–19	3.7	33.8	15.3	45.3	0.8	1.0	100.0	6.8	2,047
20–24	5.8	35.3	14.6	32.3	4.5	7.3	100.0	6.6	1,838
25–29	6.2	34.6	13.3	32.3	3.0	10.6	100.0	6.7	1,574
30–34	9.5	35.3	12.6	26.3	2.5	13.8	100.0	6.4	1,260
35–39	14.0	39.4	10.6	25.5	2.0	8.4	100.0	6.1	1,060
40–44	20.6	43.9	8.3	20.5	1.9	4.9	100.0	4.7	843
45–49	19.3	47.7	11.5	14.6	0.7	6.2	100.0	4.5	616
Residence									
Urban	5.8	29.3	10.2	39.3	3.9	11.6	100.0	7.9	3,827
Rural	11.5	42.4	15.0	25.7	1.3	4.1	100.0	5.7	5,411
Subregion									
Kampala	4.6	19.3	6.0	43.7	8.6	17.8	100.0	9.9	279
Buganda	4.7	27.7	8.7	43.4	4.3	11.2	100.0	8.3	2,772
South Buganda	4.8	23.4	6.5	45.9	5.4	14.0	100.0	8.9	1,748
North Buganda	4.4	35.1	12.4	39.2	2.4	6.5	100.0	6.9	1,024
Busoga	10.0	34.9	17.1	32.1	2.0	3.9	100.0	6.0	728
Bukedi	4.1	44.2	20.0	28.2	0.5	2.9	100.0	5.7	503
Elgon	2.7	34.8	15.9	38.6	2.1	5.8	100.0	6.7	386
Teso	5.0	41.9	22.9	24.9	0.6	4.7	100.0	5.8	481
Lango	6.1	51.3	23.2	14.9	0.3	4.2	100.0	5.5	538
Acholi	15.6	40.8	14.9	22.1	1.1	5.4	100.0	5.4	368
Karamoja	64.5	20.1	3.9	9.0	0.2	2.4	100.0	a	259
West Nile	15.7	53.8	12.8	13.8	0.9	3.0	100.0	4.4	607
Bunyoro	13.0	47.6	14.1	20.9	0.8	3.6	100.0	5.2	610
Toro	12.9	42.7	13.7	25.7	0.6	4.3	100.0	5.8	625
Ankole	5.1	36.9	8.3	37.9	2.9	8.8	100.0	7.0	724
Kigezi	6.1	41.6	14.0	26.6	1.7	10.0	100.0	6.2	361
Special areas									
IRS districts[3]	8.5	45.7	19.3	21.9	0.7	3.9	100.0	5.5	1,000
SMC districts[4]	64.5	20.1	3.9	9.0	0.2	2.4	100.0	a	259
High altitude districts[5]	4.4	38.5	14.6	32.5	1.9	8.1	100.0	6.4	699
Wealth quintile									
Lowest	21.9	49.9	17.2	9.8	0.2	1.1	100.0	4.3	1,719
Second	10.8	51.0	16.6	20.2	0.3	1.0	100.0	5.2	1,625
Middle	8.0	43.4	15.3	30.0	0.7	2.6	100.0	6.1	1,669
Fourth	5.3	30.7	12.6	42.2	2.4	6.8	100.0	7.1	1,972
Highest	2.3	17.6	6.0	47.3	6.8	20.0	100.0	9.9	2,253
Total	9.1	36.9	13.0	31.3	2.4	7.2	100.0	6.4	9,238

a = omitted because less than 50% of the respondents attended school
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] Completed 7th grade at the primary level
[2] Completed 6th grade at the secondary level
[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 2.13 Literacy

Percent distribution of women age 15–49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Higher than secondary schooling	Primary, secondary, or no schooling: Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Total	Percentage literate[1]	Number of women
Age									
15–24	4.0	58.5	20.3	16.5	0.6	0.2	100.0	82.7	3,885
15–19	1.0	65.6	18.5	14.3	0.4	0.3	100.0	85.1	2,047
20–24	7.3	50.5	22.3	19.0	0.8	0.1	100.0	80.2	1,838
25–29	10.6	46.6	22.8	19.4	0.5	0.0	100.0	80.1	1,574
30–34	13.8	39.6	22.3	23.4	1.0	0.0	100.0	75.6	1,260
35–39	8.4	41.3	22.0	27.7	0.5	0.1	100.0	71.7	1,060
40–44	4.9	34.2	21.5	38.4	0.6	0.4	100.0	60.6	843
45–49	6.2	32.9	21.7	37.2	1.0	1.0	100.0	60.7	616
Residence									
Urban	11.6	55.8	17.7	14.4	0.4	0.2	100.0	85.0	3,827
Rural	4.1	42.5	24.0	28.4	0.8	0.2	100.0	70.6	5,411
Subregion									
Kampala	17.8	58.3	14.3	9.0	0.3	0.3	100.0	90.4	279
Buganda	11.2	57.3	21.3	9.6	0.3	0.2	100.0	89.8	2,772
South Buganda	14.0	60.5	16.4	8.5	0.3	0.4	100.0	90.9	1,748
North Buganda	6.5	51.8	29.7	11.6	0.3	0.0	100.0	88.0	1,024
Busoga	3.9	39.1	25.9	31.0	0.0	0.0	100.0	69.0	728
Bukedi	2.9	48.1	26.5	22.1	0.2	0.2	100.0	77.6	503
Elgon	5.8	58.8	12.7	22.4	0.2	0.2	100.0	77.3	386
Teso	4.7	39.8	23.1	31.5	0.8	0.2	100.0	67.6	481
Lango	4.2	40.0	22.9	32.2	0.2	0.5	100.0	67.1	538
Acholi	5.4	34.6	24.9	35.1	0.0	0.0	100.0	64.9	368
Karamoja	2.4	12.7	8.6	76.3	0.0	0.0	100.0	23.7	259
West Nile	3.0	22.8	29.4	44.0	0.6	0.2	100.0	55.3	607
Bunyoro	3.6	44.4	18.2	32.0	1.5	0.3	100.0	66.2	610
Toro	4.3	39.7	26.3	25.3	4.3	0.0	100.0	70.3	625
Ankole	8.8	65.3	17.1	8.4	0.0	0.4	100.0	91.2	724
Kigezi	10.0	64.0	13.8	11.1	1.2	0.0	100.0	87.8	361
Special areas									
IRS districts[2]	3.9	36.9	30.5	28.2	0.2	0.2	100.0	71.3	1,000
SMC districts[3]	2.4	12.7	8.6	76.3	0.0	0.0	100.0	23.7	259
High altitude districts[4]	8.1	61.0	13.2	16.9	0.7	0.1	100.0	82.3	699
Wealth quintile									
Lowest	1.1	24.4	24.5	49.3	0.5	0.2	100.0	50.0	1,719
Second	1.0	37.4	27.3	32.5	1.6	0.1	100.0	65.8	1,625
Middle	2.6	51.0	25.0	20.7	0.5	0.2	100.0	78.6	1,669
Fourth	6.8	57.9	21.6	12.8	0.5	0.3	100.0	86.4	1,972
Highest	20.0	62.6	11.9	5.1	0.3	0.1	100.0	94.5	2,253
Total	7.2	48.0	21.4	22.6	0.6	0.2	100.0	76.6	9,238

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Refers to women who attended schooling higher than the secondary level and women with less schooling who can read a whole sentence or part of a sentence

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[4] Includes the 15 high altitude districts are Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 2.14 Exposure to mass media: Women

Percentage of women age 15–49 exposed to specific media on a weekly basis, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women
Age						
15–19	8.5	35.9	42.6	3.6	39.1	2,047
20–24	7.4	30.9	46.3	2.9	39.9	1,838
25–29	6.8	31.2	48.6	3.4	37.8	1,574
30–34	6.6	32.1	50.4	3.7	38.1	1,260
35–39	5.2	29.9	47.6	3.1	39.9	1,060
40–44	4.0	26.7	48.5	2.2	42.9	843
45–49	5.4	22.7	49.4	3.3	41.8	616
Residence						
Urban	9.3	46.9	48.7	4.9	30.1	3,827
Rural	4.9	20.1	45.8	2.0	46.2	5,411
Subregion						
Kampala	8.3	73.9	43.1	4.1	18.1	279
Buganda	12.4	50.7	46.5	5.9	27.9	2,772
South Buganda	14.3	59.0	45.7	7.6	25.2	1,748
North Buganda	9.1	36.6	47.8	3.1	32.7	1,024
Busoga	4.5	33.8	60.3	2.3	29.8	728
Bukedi	2.9	25.2	53.2	1.3	38.2	503
Elgon	6.5	25.1	51.4	2.0	36.6	386
Teso	3.3	6.7	25.4	0.9	70.1	481
Lango	6.0	12.0	61.6	3.3	36.9	538
Acholi	3.3	10.6	28.7	1.7	66.7	368
Karamoja	2.6	7.6	36.5	1.3	62.7	259
West Nile	3.1	12.4	37.7	1.9	57.4	607
Bunyoro	2.7	20.7	43.4	1.7	50.2	610
Toro	3.5	17.0	36.6	2.0	57.1	625
Ankole	5.0	34.8	59.4	2.0	28.4	724
Kigezi	6.1	23.4	61.3	3.3	32.2	361
Education						
No education	0.1	12.2	35.1	0.0	60.4	842
Primary	2.0	18.7	44.1	0.6	48.3	4,616
Secondary	11.4	48.2	52.9	5.7	26.0	3,115
More than secondary	25.7	62.1	54.7	13.7	15.5	664
Special areas						
IRS districts[1]	4.8	18.2	48.6	1.9	44.8	1,000
SMC districts[2]	2.6	7.6	36.5	1.3	62.7	259
High altitude districts[3]	6.6	23.2	56.4	2.8	34.5	699
Wealth quintile						
Lowest	1.2	2.6	29.8	0.1	69.1	1,719
Second	2.5	4.5	43.6	0.4	54.5	1,625
Middle	2.5	14.9	51.3	0.8	43.7	1,669
Fourth	7.7	41.4	57.6	4.3	27.8	1,972
Highest	16.3	75.4	50.0	8.5	13.4	2,253
Total	6.7	31.2	47.0	3.2	39.5	9,238

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 2.15 Internet usage: Women

Percentage of women age 15–49 who have ever used the internet; percentage who have used the internet in the past 12 months; and among women who have used the internet in the past 12 months, percent distribution by frequency of internet use in the past month, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Owns any mobile phone	Owns a smart phone	Ever used the Internet	Used the Internet in the past 12 months	Number	Among respondents who used the internet in the past 12 months, percentage who in the past month used the internet: Almost every day	At least once a week	Less than once a week	Not at all	Total	Number
Age											
15–19	27.9	11.0	24.9	22.3	2,047	38.0	37.9	17.9	6.3	100.0	457
20–24	64.4	24.8	30.3	28.2	1,838	64.2	22.5	8.8	4.5	100.0	518
25–29	72.9	30.3	32.2	30.0	1,574	53.7	33.3	12.6	0.5	100.0	472
30–34	72.0	27.3	28.6	27.0	1,260	59.7	25.6	11.8	2.9	100.0	340
35–39	76.1	24.2	25.4	23.4	1,060	54.8	31.9	12.4	0.9	100.0	248
40–44	73.0	18.3	18.0	16.6	843	47.3	33.7	15.3	3.7	100.0	140
45–49	72.8	19.0	19.4	17.4	616	48.0	42.5	8.1	1.4	100.0	107
Residence											
Urban	72.0	34.9	41.4	38.6	3,827	57.8	28.4	11.5	2.3	100.0	1,476
Rural	54.0	12.9	16.4	14.9	5,411	45.0	35.5	14.7	4.9	100.0	806
Subregion											
Kampala	86.5	61.6	68.4	65.7	279	71.3	22.2	5.0	1.4	100.0	183
Buganda	74.1	38.5	47.9	43.9	2,772	52.0	32.7	11.7	3.6	100.0	1,217
South Buganda	74.9	44.8	55.9	51.4	1,748	53.0	31.5	12.2	3.3	100.0	898
North Buganda	72.8	27.7	34.2	31.2	1,024	49.1	36.0	10.2	4.7	100.0	320
Busoga	60.3	16.2	18.8	17.7	728	43.0	38.5	17.5	1.0	100.0	129
Bukedi	48.9	11.6	16.8	15.3	503	46.7	23.9	21.8	7.6	100.0	77
Elgon	61.5	19.0	26.5	24.6	386	49.7	30.2	10.3	9.8	100.0	95
Teso	43.6	8.2	9.2	8.4	481	64.3	27.2	6.5	2.0	100.0	40
Lango	47.9	6.2	7.6	7.4	538	58.8	24.5	12.8	4.0	100.0	40
Acholi	45.5	11.6	14.3	13.7	368	56.6	27.6	15.7	0.0	100.0	51
Karamoja	30.6	4.1	5.2	4.8	259	(65.3)	(23.0)	(11.6)	(0.0)	100.0	12
West Nile	49.6	7.0	7.1	6.4	607	(36.8)	(34.9)	(26.6)	(1.8)	100.0	39
Bunyoro	56.6	9.8	11.4	9.8	610	55.0	22.1	15.8	7.1	100.0	60
Toro	60.9	14.8	16.8	15.6	625	47.0	30.9	22.1	0.0	100.0	97
Ankole	69.4	24.2	28.8	26.9	724	59.2	29.8	10.3	0.6	100.0	195
Kigezi	60.7	12.6	15.9	12.8	361	42.4	37.0	17.7	2.9	100.0	46
Education											
No education	41.1	3.6	3.1	2.6	842	*	*	*	*	100.0	22
Primary	54.4	9.1	10.1	8.9	4,616	38.6	35.9	19.8	5.7	100.0	412
Secondary	70.3	33.8	46.7	42.7	3,115	49.9	33.1	13.4	3.6	100.0	1,330
More than secondary	95.1	79.0	79.5	77.8	664	72.9	21.9	4.7	0.5	100.0	517
Special areas											
IRS districts[1]	51.2	11.5	14.1	12.5	1,000	48.1	28.6	20.0	3.3	100.0	125
SMC districts[2]	30.6	4.1	5.2	4.8	259	(65.3)	(23.0)	(11.6)	(0.0)	100.0	12
High altitude districts[3]	60.9	15.5	20.8	18.6	699	48.2	33.4	12.0	6.4	100.0	130
Wealth quintile											
Lowest	33.6	1.8	2.2	1.8	1,719	(30.9)	(45.1)	(15.8)	(8.3)	100.0	32
Second	51.9	5.4	6.7	5.9	1,625	34.8	33.9	24.7	6.6	100.0	95
Middle	61.9	10.5	14.6	12.8	1,669	30.7	43.0	21.4	4.8	100.0	214
Fourth	70.3	26.0	33.6	30.4	1,972	42.0	36.1	17.1	4.8	100.0	600
Highest	81.7	54.2	63.1	59.5	2,253	63.8	26.1	8.2	1.9	100.0	1,340
Total	61.5	22.0	26.8	24.7	9,238	53.3	30.9	12.6	3.2	100.0	2,281

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

MALARIA PREVENTION 3

Key Findings

- ***Ownership of insecticide-treated nets (ITNs):*** 84% of households in Uganda owned at least one ITN, and 56% of households had at least one ITN for every two people who stayed in the household the night before the survey.
- ***Sources of ITNs:*** 89% of ITNs owned by households were obtained from mass campaigns, 4% from antenatal care (ANC) visits, and the rest from other sources including shops/markets.
- ***Access to an ITN:*** 71% of the population had access to an ITN, meaning they could sleep under an ITN if every ITN in a household were used by up to two people.
- ***Use of ITNs:*** 65% of the household population, 69% of children under age 5, and 72% of pregnant women age 15–49 slept under an ITN the night before the survey.
- ***Indoor residual spraying (IRS):*** 81% of households in districts designated for spraying were sprayed in the past 12 months.
- ***Intermittent preventive treatment in pregnancy (IPTp):*** 73% of women with a pregnancy in the 2 years preceding the survey received at least three doses of sulphadoxine-pyrimethamine (SP)/Fansidar for prevention of malaria in pregnancy.

This chapter describes population coverage rates for some of the key malaria prevention interventions in Uganda, including availability, source, use of, and disposal or repurposing of mosquito nets; coverage of IRS; and prophylactic use of antimalarial medicines among pregnant women.

The Uganda Malaria Reduction and Elimination Strategic Plan 2021–2025 (UMRESP) (Uganda National Malaria Control Division 2023) was developed to provide a common framework for accelerating evidence-based malaria reduction interventions by the government, its development partners, the private sector, and all stakeholders for malaria prevention and treatment. The plan envisions universal coverage with ITNs through mass campaigns, and maintenance of universal coverage through routine distribution. Routine/continuous distribution primarily targets vulnerable groups such as children under age 5 and pregnant women. Additionally, the more recent Uganda Malaria Elimination Strategic Plan 2026–2030 (UMESP) (Uganda National Malaria Elimination Division 2025) highlights IPTp as a key intervention for preventing malaria in pregnancy.

3.1 Ownership and Coverage of Insecticide-treated Nets

Ownership of insecticide-treated nets

Households that have at least one ITN. An ITN is defined as a factory-treated net that does not require any further treatment.

Sample: Households

Full household insecticide-treated net coverage

Percentage of households with at least one ITN for every two people

Sample: Households with at least one person who stayed in the household the night before the survey

In surveys conducted prior to 2016, the definition of an ITN included nets that had been soaked/retreated with insecticides within the past 12 months. In the 2016 Uganda Demographic and Health Survey and the 2018–19 Uganda Malaria Indicator Survey (UMIS), questions on the retreatment of nets were removed, as nets that require annual retreatment and the products used to do this were no longer distributed. As a result, the distinction between ITNs and long-lasting insecticidal nets (LLINs) is no longer meaningful.

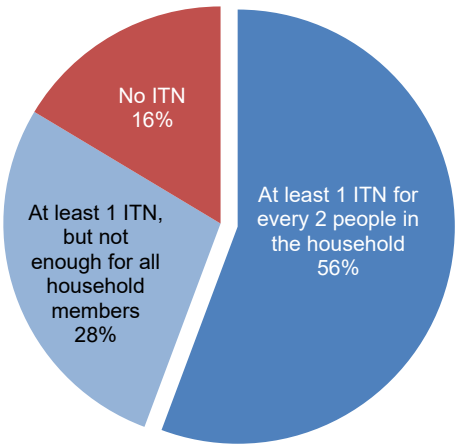
ITNs repel and kill mosquitoes, thus providing protection against mosquito bites and reducing the transmission of malaria parasites. When high coverage with ITNs is achieved, ITNs help decrease malaria risk at the individual level as well as at the community level by reducing the vector population. The distribution and use of ITNs is one of the central interventions for preventing malaria infection in Uganda. One of the strategic objectives of the UMESP is to protect at least 95% of the population through stratified prevention interventions such as next-generation LLINs, targeted IRS, larval source management, and climate-responsive vector control. The last mass ITN distribution campaign in Uganda took place between May 2023 and December 2023.

Nationally, 84% of households in Uganda own at least one ITN, and 87% own at least one of any type of mosquito net. The UMESP states that by 2030, 100% of households will have at least one ITN for every two people. In the 2024–25 UMIS, 56% of households had at least one ITN for every two people in the household (**Table 3.1**).

More than half of households (56%) had at least one ITN for every two persons who stayed in the household the night preceding the survey. In other words, 56% of households owned enough ITNs to cover all household members if it is assumed that one net is shared by two people (**Table 3.1** and **Figure 3.1**). Thus, to ensure sufficient household coverage of one net per two persons, the scope of distribution needs to expand to reach the 16% of households that do not own any ITNs. In addition, the quantity of ITNs distributed needs to increase to provide sufficient ITNs for the 28% of households that own at least one ITN but have an insufficient supply for the number of household members (**Figure 3.1**).

Figure 3.1 **Household coverage of insecticide-treated nets**

Percent distribution of households

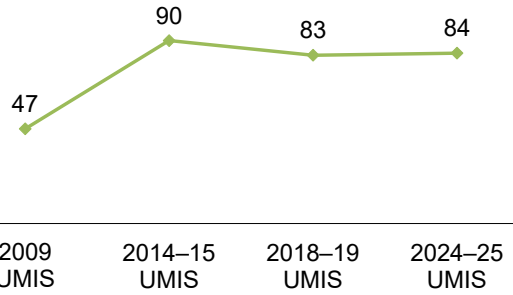


Trends: The percentage of households that owned at least one ITN remained stable, from 83% in the 2018–2019 UMIS to 84% in the 2024–25 UMIS (**Figure 3.2**).

The percentage of households with at least one ITN for every two persons who stayed in the household the night before the survey remained stable between the 2018–29 UMIS and the 2024–25 UMIS, at 54% and 56%, respectively.

Figure 3.2 **Trends in household ownership of insecticide-treated nets**

Percentage of households owning at least one ITN



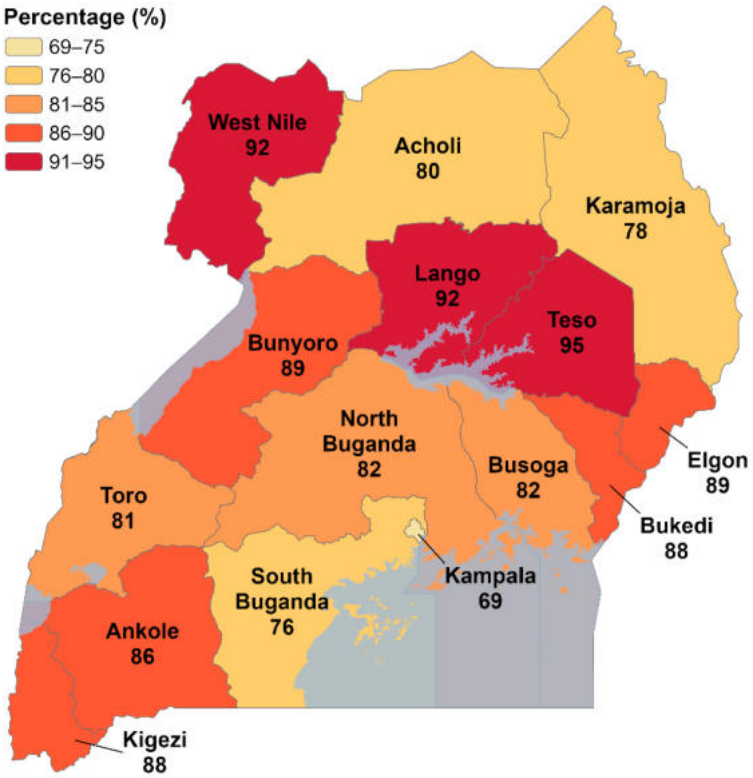
Note: The definition of an ITN in surveys conducted prior to 2016 included nets that had been soaked with insecticides within the past 12 months.

Patterns by background characteristics

- The percentage of households with at least one ITN was relatively stable across wealth quintiles, ranging from 79% in the highest wealth quintile to 86% in the middle quintile.
- The percentage of households with at least one ITN was highest in Teso (95%) and lowest in Kampala (69%) (**Map 3.1**).
- A greater percentage of households in urban areas than in rural areas had at least one ITN for every two people who stayed in the household the previous night (58% and 54%, respectively) (**Table 3.1**).

Map 3.1 **Insecticide-treated net ownership by subregion**

Percentage of households with at least one ITN

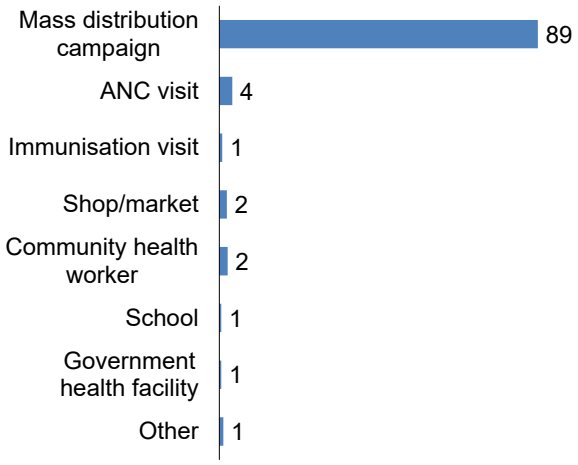


3.2 Source of Nets

The majority of ITNs (89%) were obtained from mass distribution campaigns. Another 5% of ITNs came from routine healthcare visits (4% from ANC visits and 1% from immunisation visits), 2% were purchased from shops or markets, 2% were obtained from community health workers, and 1% each were obtained from schools, government health facilities, and other public and private distribution sites (**Figure 3.3** and **Table 3.2**).

Figure 3.3 **Source of insecticide-treated nets**

Percent distribution of ITNs in interviewed households



3.3 Household Access to and Use of Insecticide-treated Nets

Access to an insecticide-treated net

Percentage of the population that could sleep under an ITN if each ITN in the household were used by up to two people

Sample: De facto household population

Use of insecticide-treated nets

Percentage of the population that slept under an ITN the night before the survey

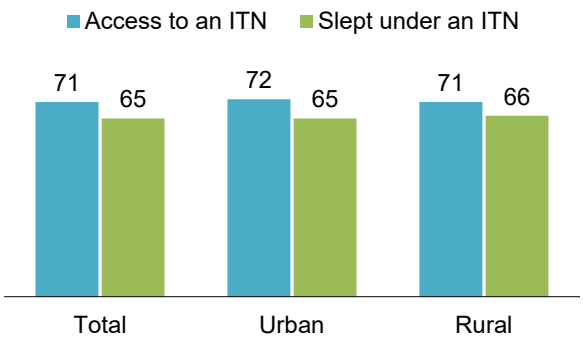
Sample: De facto household population

Access to an ITN is measured by the proportion of the population that could sleep under an ITN if each ITN in the household were used by up to two people. Comparing ITN access and ITN use indicators can help programmes identify any behavioural gaps in which available ITNs are not being used. If the difference between these indicators is substantial, the ITN programme may need to focus on behaviour change and on how to identify the main drivers of or barriers to ITN use to design an appropriate intervention. This type of analysis helps ITN programmes determine whether they need to achieve higher ITN coverage, promote ITN use, or both.

Nationally, 71% of the de facto household population in Uganda that stayed in the household the night before the survey could sleep under an ITN if each ITN were used by up to two people (**Table 3.3**). However, only 65% reported having slept under an ITN the night before the survey (**Table 3.4**), resulting in a difference of 6 percentage points between ITN access and use at the population level. No significant variation was found in access and use between urban and rural areas in the 2024–25 UMIS (**Figure 3.4**). Overall, 80% of all existing ITNs were used by the household population the night before the survey (**Table 3.5**).

Figure 3.4 **Access to and use of insecticide-treated nets**

Percentages of the household population with access to an ITN and who slept under an ITN the night before the survey



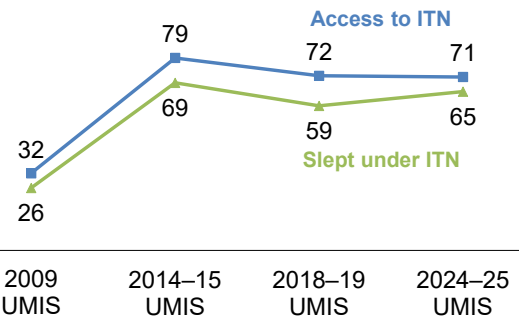
Trends: The percentage of the household population with access to an ITN remained stable, from 72% in the 2018–19 UMIS to 71% in the 2024–25 UMIS. However, the percentage of the household population that slept under an ITN the night before the survey increased over the same period, from 59% to 65%. The gap between ITN access and ITN use decreased from 12 percentage points to 6 percentage points between 2018–19 and 2024–25 (**Figure 3.5**).

Patterns by background characteristics

- The household populations in urban (72%) and rural (71%) areas had equal access to ITNs (**Figure 3.5**).
- ITN access ranged from 58% in Karamoja to 80% in Teso (**Map 3.2**).

Figure 3.5 **Trends in insecticide-treated net access and use**

Percentage of the household population with access to an ITN and percentage of the population who slept under an ITN the night before the survey

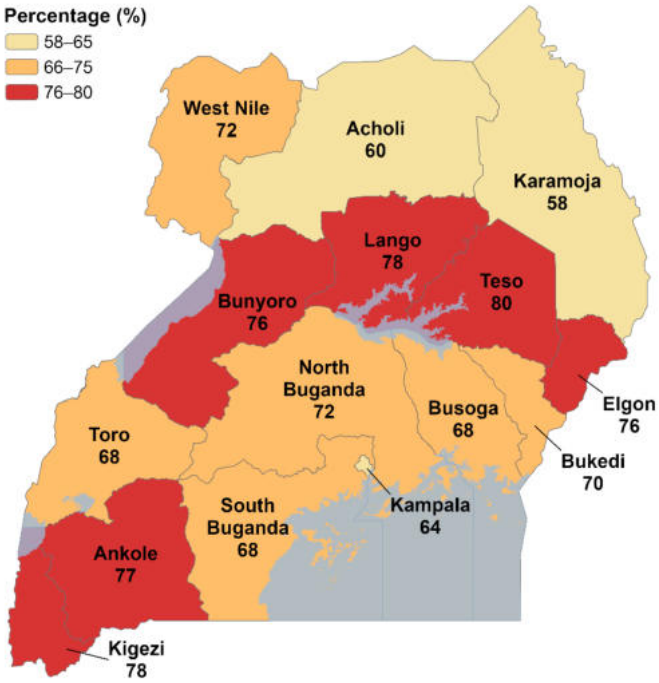


Note: The definition of an ITN in surveys conducted prior to 2016 included nets that had been soaked with insecticides within the past 12 months.

- ITN use ranged from 55% in Kampala, Karamoja, and Toro to 78% in Teso (**Map 3.3**).
- Among all regions, the difference between ITN access and ITN use was largest in Toro (68% versus 55%, or 13 percentage points), followed by Kigezi (78% versus 68%, or 10 percentage points); the lowest difference was in Lango (1 percentage point), where both access (78%) and use (77%) were high (**Table 3.3** and **Table 3.4**).

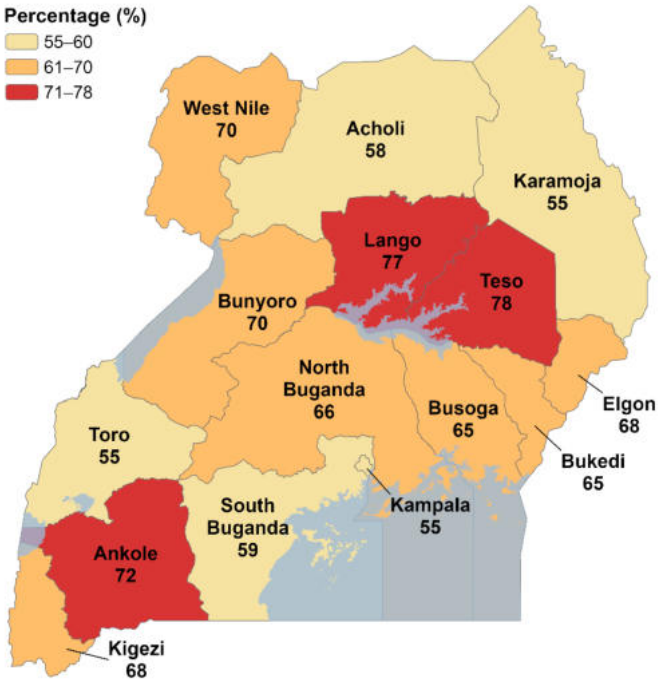
Map 3.2 **Insecticide-treated net access by subregion**

Percentage of the household population that could sleep under an ITN if each ITN in the household were used by up to two people



Map 3.3 **Insecticide-treated net use by household population**

Percentage of the household population that slept under an ITN the previous night



3.4 Use of Insecticide-treated Nets by Children and Pregnant Women

Natural immunity to malaria is acquired over time for those living in high malaria transmission areas such as Uganda (Doolan et al. 2009). Children under age 5 are prone to severe malaria infection due to lack of acquired immunity. For about 6 months following birth, antibodies acquired from the mother during pregnancy protect the child, but this maternal immunity gradually disappears, after which the child starts to develop his or her own immunity to malaria. Age is an important factor in determining levels of acquired immunity to malaria. Acquired immunity does not prevent infection but rather protects against severe disease and death. Children living in high-endemic areas may experience episodes of malaria illness but usually do not suffer from severe, life-threatening forms. Sixty-nine percent of children under age 5 and 72% of pregnant women slept under an ITN the night before the survey. In households with at least one ITN, 78% of children under age 5 and 84% of pregnant women slept under an ITN the night before the survey (**Table 3.6** and **Table 3.7**).

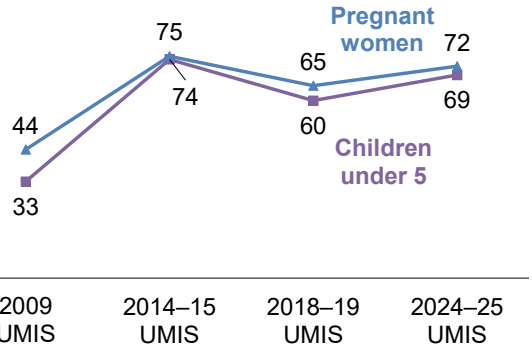
Trends: The percentage of children under age 5 who slept under an ITN the night before the survey rose from 60% in the 2018–19 UMIS to 69% in the 2024–25 UMIS; similarly, the percentage of pregnant women who slept under an ITN increased from 65% in the 2018–19 UMIS to 72% in the 2024–25 UMIS (**Figure 3.6**).

Patterns by background characteristics

- ITN use by children under age 5 ranged from 56% in Kampala to 85% in Lango (**Table 3.6**).
- ITN use by pregnant women ranged from 55% in Kampala to 86% in Acholi (**Table 3.7**).
- Use of ITNs decreased with the pregnant woman's education level, from 79% among those with no education to 70% among those with secondary education (**Table 3.7**).

Figure 3.6 **Insecticide-treated net use by children and pregnant women**

Percentages of children and pregnant women using an ITN the night before the survey



Note: The definition of an ITN in surveys conducted prior to 2016 included nets that had been soaked with insecticides within the past 12 months.

3.5 Reasons Mosquito Nets were not Used and Household Disposal of Nets

Table 3.8 presents reasons respondents gave for not using mosquito nets the night before the survey. This information is important to the National Malaria Control Division (NMCD) for identifying barriers to net use. Overall, 20% of ITNs were not used the night before the survey.

The main reasons given for not using a net for sleeping the night before the survey were that the net was an extra net or was being saved for later (67%), the usual user did not sleep there (9%), and the net was too old or had too many holes (6%).

Patterns by background characteristics

- The percentage of ITNs that were not used the night before the survey varied little according to household wealth (17% to 22%).
- The percentage of nets that were not used ranged from 7% in Teso to 31% in Karamoja.

Trends: The percentage of ITNs that were not used for sleeping the night before the survey decreased from 25% in the 2018–19 UMIS to 20% in the 2024–25 UMIS.

Table 3.9 shows the percentage of nets that were disposed of or repurposed in the past 12 months and the length of use prior to disposal.

Overall, 31% of households disposed of or repurposed a net in the past 12 months. Most households that disposed of or repurposed a net had used it for less than 2 years (57%), and 32% had used it for 2–4 years.

Among households that disposed of a net in the past 12 months, most households (89%) did so because the net was torn (**Table 3.10**). Forty-five percent of households disposed of their nets at a garbage collection centre/point, 15% repurposed them for farming activities, and 27% repurposed them in other ways such as for window screening, furniture, or goal posts (**Table 3.11**).

3.6 Indoor Residual Spraying

IRS is a vector control method recommended by the World Health Organization (WHO). In 2007, IRS was introduced in Northern and Eastern Uganda using mostly pyrethroids and organochlorines. With rising vector resistance, the Ministry of Health switched to carbamates for IRS. Between 2010 and 2014, IRS was scaled up to cover 11 districts with high malaria burden in Northern Uganda: Oyam, Kole, Nwoya, Amuru, Agago, Gulu, Kitgum, Pader, Omoro, Apac, and Lamwo. These districts were also included as part of an emergency spray campaign due to an upsurge of malaria in 2016–17.

In 2014, IRS spraying shifted from these 11 districts to 16 high-burden districts in Northern and Eastern Uganda: Alebtong, Amolatar, Dokolo, Lira, Otuke, Kaberamaido, Serere, Tororo, Pallisa, Koboko, Budaka, Butaleja, Namutumba, Buteba, Namutumba, and Bugiri. These districts were classified as IRS districts by the time of the 2014–15 UMIS and the 2018–19 UMIS. In 2023, another 9 districts were added in the West Nile subregion: Arua, Adjumani, Koboko, Madio-Okollo, Maracha, Moyo, Obongi, Terego, and Yumbe.

At the time of the survey, a total of 20 districts were implementing IRS: Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba.

Of note, because IRS spraying is not conducted across all of Uganda, the national estimate for coverage is not an accurate representation of this important malaria control intervention. Instead, results presented by current IRS districts are a better representation of IRS coverage in Uganda.

Table 3.12 shows that 10% of all households nationally received IRS in the past 12 months. Eighty-four percent of households had at least one ITN and/or IRS in the past 12 months, while 60% of households had at least one ITN for every two persons and/or IRS in the past 12 months.

Within the IRS districts, 81% of households received IRS in the past 12 months.

Among households with IRS in the past 12 months, the majority were sprayed by a government programme or nongovernmental organisation (NGO) (91%). Among households in IRS districts, 97% were sprayed by a government programme or NGO.

Trends: The percentage of households that received IRS nationally has remained stable at 10% since the 2018–19 UMIS.

Patterns by background characteristics

- A higher percentage of households in rural areas (12%) than in urban areas (8%) were sprayed with IRS.
- Bukedi (67%), West Nile (50%), Lango (18%), and Busoga (16%) had the highest percentages of households sprayed with IRS. Bunyoro, Kigezi, Ankole, and North Buganda had the lowest percentages of households sprayed with IRS (1% or less in each subregion).

3.7 Village Health Teams

Health services at the community level are provided by community health workers (CHWs) and community medicine distributors (CMDs). Together these form village health teams (VHTs). Each village has at least five members selected by the community to form a VHT. Two members are trained to provide integrated community case management for malaria, pneumonia, and diarrhoea. VHTs facilitate community participation and empowerment in the delivery of health services. They are responsible for health promotion activities and community mobilisation to improve health-seeking behaviour, disease prevention, provision and adherence to treatment, and referral to health facilities.

As shown in **Table 3.13**, the 2024–25 UMIS assessed the perceived availability of malaria services by VHTs. Thirty-five percent of households reported that a VHT member or CHW was conducting malaria testing in their village or community, and 53% reported that a VHT member or CHW was distributing malaria medicines. Among households that reported the presence of a VHT or CHW who distributes malaria medications, 42% reported that the VHT or CHW currently has medicines available, and 18% did not know if the VHT or CHW has medicines available.

Patterns by background characteristics

- A slightly higher percentage of rural households than urban households reported the presence of CHWs, CMDs, or VHTs in their villages and communities; 38% of rural and 30% of urban households reported that VHTs were conducting malaria testing in their village or community, while 57% of rural and 46% of urban households reported that VHTs were distributing malaria medicines.
- Karamoja (76%), West Nile (66%), and Lango (64%) had the highest percentages of CHWs, CMDs, and VHTs testing for malaria. These same subregions had some of the highest percentages of CMDs, CHWs, and VHTs distributing malaria medicines (89%, 83%, and 77%, respectively). Bukedi also had a high percentage of community workers distributing malaria medicines (81%).

3.8 Antenatal Care From a Skilled Provider

Antenatal care from a skilled provider

Pregnancy care received from skilled providers such as doctors and nurses/midwives, clinical officers, and nursing aides/assistants

Sample: Women age 15–49 with a live birth in the 2 years before the survey

The 2024–25 UMIS assessed the use of ANC services for the most recent birth in the 2 years preceding the survey among women age 15–29. Overall, 97% of women received ANC from a skilled provider for their last birth in the 2 years preceding the survey (**Table 3.14**). Seventy-eight percent received care from a nurse or midwife, and 15% received care from a doctor. Two percent of women received no ANC (**Table 3.14**).

In examining the distribution of women age 15–29 who had a live birth in the 2 years preceding the survey by number of ANC visits for the most recent live birth, 78% of women had four or more ANC visits, 19% had two or three ANC visits, and 7% achieved the eight recommended ANC contacts. The largest percentage of women attended their first ANC visit between months 4 and 5 of pregnancy (52%). Among those who attended ANC, the median months pregnant at first visit was 4.2 (**Table 3.15**).

3.9 Malaria in Pregnancy

Intermittent preventive treatment in pregnancy

Percentage of women who took at least three doses of SP/Fansidar during their last pregnancy.

Sample: Women age 15–49 with a live birth in the 2 years before the survey

Malaria infection during pregnancy is a major public health problem in Uganda, with substantial risks for the mother, her foetus, and the neonate. The WHO recommends a package of interventions for reducing the negative health effects associated with malaria in pregnancy: prompt diagnosis and treatment of confirmed infection, use of LLINs, and IPTp (WHO 2017).

IPTp is a full therapeutic course of antimalarial medicine given to pregnant women at routine ANC visits to prevent malaria. IPTp helps prevent maternal malaria episodes, maternal and foetal anaemia, placental parasitaemia, low birth weight, and neonatal mortality.

SP, also known as Fansidar, is the recommended drug for IPTp in Uganda. For more than 10 years, the Ministry of Health has been implementing IPTp, which currently involves providing pregnant women with monthly doses of SP/Fansidar during ANC visits, starting after 13 weeks of gestation and continuing until delivery. Pregnant women should receive at least three to four doses to ensure adequate protection for both the mother and her unborn child against malaria.

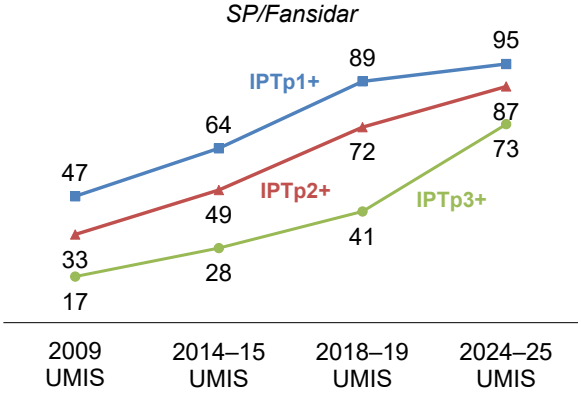
In 2016, the NMCD adopted the WHO recommendation to administer one dose of SP/Fansidar at each ANC visit after the first trimester, with at least 1 month between doses (WHO 2012a; WHO 2012b). The household survey indicator used to measure coverage of this intervention is the percentage of women with a live birth in the 2 years preceding the survey who received three or more doses of SP/Fansidar to prevent malaria during her most recent pregnancy (IPTp3+).

Ninety-five percent of women with a live birth in the 2 years preceding the survey received one or more doses of SP/Fansidar to prevent malaria. Eighty-seven percent of the women received two or more doses of SP/Fansidar, and 73% of the women received three or more doses of SP/Fansidar (**Table 3.16**). Among women with a live birth in the 2 years preceding the survey who took SP/Fansidar fewer than three times during pregnancy, the most commonly cited reason for taking SP/Fansidar fewer than three times was that it was not given (35%), followed by lack of awareness (31%) (**Table 3.17**).

Trends: The percentage of women receiving one or more doses of IPTp increased from 89% in the 2018–19 UMIS to 95% in the 2024–25 UMIS. The percentage of women receiving two or more doses of SP/Fansidar for IPTp increased from 72% in the 2018–19 UMIS to 87% in the 2024–25 UMIS. Similarly, the percentage of women receiving three or more doses of SP/Fansidar for IPTp increased from 41% in the 2018–19 UMIS to 73% in the 2024–25 UMIS (**Figure 3.7**).

Figure 3.7 **Trends in use of intermittent preventive treatment in pregnancy**

Percentage of women with a live birth in the 2 years before the survey who received at least 1, 2, or 3 doses of SP/Fansidar



Patterns by background characteristics

- IPTp2+ coverage ranged from 81% in Kampala to 93% in Karamoja (**Table 3.16**).
- IPTp3+ coverage ranged from 63% in Acholi to 82% in Karamoja, West Nile, and Toro.

List of Tables

For detailed information on malaria prevention, see the following tables:

- **Table 3.1 Household possession of mosquito nets**
- **Table 3.2 Source of mosquito nets**
- **Table 3.3 Access to an insecticide-treated net**
- **Table 3.4 Use of mosquito nets by persons in the household**
- **Table 3.5 Use of existing insecticide-treated nets**
- **Table 3.6 Use of mosquito nets by children**
- **Table 3.7 Use of mosquito nets by pregnant women**
- **Table 3.8 Main reason mosquito net was not used the night before the survey**
- **Table 3.9 Household disposal of mosquito nets**
- **Table 3.10 Main reason mosquito net was disposed of/repurposed**
- **Table 3.11 Means of net disposal/repurposing**
- **Table 3.12 Indoor residual spraying against mosquitoes**
- **Table 3.13 Perceived availability of malaria services by village health teams**
- **Table 3.14 Antenatal care**
- **Table 3.15 Number of antenatal care visits and timing of first visit**
- **Table 3.16 Use of intermittent preventive treatment in pregnancy**
- **Table 3.17 Reasons for taking fewer than recommended number of doses of sulphadoxine-pyrimethamine/Fansidar**

Table 3.1 Household possession of mosquito nets

Percentages of households with at least one mosquito net (treated or untreated) and at least one insecticide-treated net (ITN); average number of nets and ITNs per household; and percentages of households with at least one net and at least one ITN per two persons who stayed in the household the night before the survey, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage of households with at least one mosquito net		Average number of nets per household		Number of households	Percentage of households with at least one net for every two persons who stayed in the household last night[1]		Number of households with at least one person who stayed in the household last night
	Any mosquito net	ITN[2]	Any mosquito net	ITN[2]		Any mosquito net	ITN[2]	
Residence								
Urban	87.5	81.1	2.4	2.2	3,792	64.6	58.0	3,787
Rural	86.5	85.3	2.3	2.2	5,666	55.4	54.1	5,663
Subregion								
Kampala	84.9	68.8	2.2	1.8	273	67.9	53.2	273
Buganda	84.8	78.4	2.3	2.1	2,867	63.8	56.9	2,863
South Buganda	84.7	75.9	2.3	2.0	1,706	65.2	55.9	1,702
North Buganda	85.1	82.0	2.3	2.2	1,162	61.8	58.5	1,162
Busoga	82.9	82.1	2.1	2.0	822	53.5	52.5	821
Bukedi	89.0	87.7	2.5	2.4	464	50.7	49.0	464
Elgon	89.3	88.9	2.7	2.7	392	60.2	60.0	391
Teso	95.4	95.3	2.7	2.7	433	59.5	59.2	433
Lango	92.3	92.3	2.3	2.3	539	57.8	57.8	539
Acholi	82.7	79.6	1.8	1.7	402	42.7	40.3	402
Karamoja	78.3	77.6	1.9	1.9	272	39.2	38.3	272
West Nile	91.7	91.6	2.4	2.4	570	53.9	53.7	569
Bunyoro	90.2	89.0	2.6	2.5	580	58.7	57.3	580
Toro	82.4	81.2	2.1	2.0	668	54.4	52.8	668
Ankole	90.3	86.0	2.5	2.4	787	68.1	64.4	787
Kigezi	89.6	88.0	2.5	2.4	389	68.8	67.1	389
Special areas								
IRS districts[3]	91.5	90.7	2.5	2.4	968	56.9	55.7	966
SMC districts[4]	78.3	77.6	1.9	1.9	272	39.2	38.3	272
High altitude districts[5]	89.4	88.3	2.6	2.5	739	64.5	63.5	738
Wealth quintile								
Lowest	85.2	85.1	1.9	1.9	1,840	46.3	46.1	1,840
Second	84.7	84.1	2.1	2.1	1,830	52.1	51.7	1,829
Middle	87.2	86.3	2.4	2.4	1,818	59.5	58.4	1,817
Fourth	87.1	84.5	2.4	2.3	1,932	62.8	60.0	1,931
Highest	90.0	78.6	2.7	2.3	2,039	73.1	61.4	2,034
Total	86.9	83.6	2.3	2.2	9,458	59.1	55.7	9,450

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] De facto household members

[2] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.2 Source of mosquito nets

Percent distribution of insecticide-treated nets (ITNs), non-ITNs, and all mosquito nets by source of net, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Mass distribution campaign	ANC visit	Immunisation visit	Government health facility	Private health facility	PNFP/ NGO	Pharmacy	Shop/ market	Community health worker	Religious institution	School	Hawker	Other	Don't know/ missing	Total	Number of mosquito nets
							ITNs[1]									
Residence																
Urban	87.8	3.5	0.7	0.5	0.2	0.0	0.2	3.7	2.2	0.0	0.1	0.4	0.5	0.0	100.0	8,325
Rural	89.9	3.7	0.9	0.5	0.1	0.0	0.1	1.1	2.3	0.1	0.7	0.2	0.3	0.0	100.0	12,600
Subregion																
Kampala	86.3	1.2	0.3	0.0	0.0	0.0	0.3	8.0	3.3	0.0	0.0	0.3	0.2	0.0	100.0	481
Buganda	88.2	2.3	0.9	0.6	0.3	0.0	0.0	4.4	2.8	0.0	0.0	0.4	0.2	0.0	100.0	6,038
South Buganda	87.8	2.2	0.9	0.6	0.3	0.0	0.0	6.0	1.5	0.0	0.0	0.6	0.1	0.0	100.0	3,468
North Buganda	88.7	2.4	0.8	0.5	0.2	0.0	0.1	2.2	4.6	0.0	0.0	0.2	0.4	0.0	100.0	2,570
Busoga	93.2	2.7	0.7	0.0	0.0	0.0	0.2	2.4	0.0	0.1	0.0	0.5	0.2	0.0	100.0	1,671
Bukedi	79.3	6.5	0.5	0.9	0.1	0.0	0.0	0.8	5.3	0.7	4.8	0.0	1.0	0.2	100.0	1,115
Elgon	86.8	5.3	0.9	0.5	0.1	0.0	0.0	0.1	2.4	0.3	1.9	0.3	1.4	0.0	100.0	1,040
Teso	93.1	2.2	0.3	0.1	0.0	0.0	0.0	3.4	0.0	0.0	0.1	0.7	0.0	0.0	100.0	1,157
Lango	90.0	4.7	1.1	0.4	0.0	0.0	0.7	0.8	1.8	0.0	0.0	0.2	0.2	0.1	100.0	1,227
Acholi	70.6	4.9	0.4	0.6	0.5	0.5	0.2	2.9	15.2	0.0	3.0	1.0	0.2	0.0	100.0	690
Karamoja	87.8	9.1	1.5	0.2	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.6	0.0	100.0	517
West Nile	92.0	4.1	0.5	0.3	0.0	0.0	1.2	1.5	0.2	0.0	0.0	0.2	0.1	0.1	100.0	1,359
Bunyoro	84.3	4.7	1.6	1.8	0.0	0.1	0.0	0.2	5.4	0.0	0.1	0.2	1.1	0.4	100.0	1,470
Toro	94.3	4.5	0.2	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.1	0.0	100.0	1,348
Ankole	95.1	2.7	0.8	0.5	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.4	0.0	100.0	1,870
Kigezi	94.5	3.9	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.1	100.0	945
Special areas																
IRS districts[2]	89.1	5.0	0.7	0.3	0.0	0.0	0.4	1.3	0.3	0.1	2.2	0.1	0.3	0.1	100.0	2,370
SMC district[3]	87.8	9.1	1.5	0.2	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.6	0.0	100.0	517
High altitude districts[4]	90.2	4.7	0.9	0.4	0.0	0.0	0.0	0.0	1.3	0.3	1.1	0.2	0.9	0.0	100.0	1,875
Wealth quintile																
Lowest	88.6	5.3	0.8	0.4	0.1	0.0	0.0	0.7	2.2	0.0	1.1	0.2	0.3	0.1	100.0	3,482
Second	89.6	4.2	0.9	0.3	0.0	0.1	0.0	0.5	2.7	0.2	0.8	0.2	0.4	0.1	100.0	3,858
Middle	91.1	3.7	0.7	0.5	0.1	0.0	0.0	0.9	2.2	0.0	0.2	0.3	0.1	0.1	100.0	4,348
Fourth	90.3	2.6	1.0	0.8	0.2	0.0	0.1	1.4	2.7	0.0	0.3	0.3	0.3	0.0	100.0	4,488
Highest	85.9	2.9	0.6	0.4	0.1	0.0	0.5	6.5	1.8	0.0	0.0	0.5	0.6	0.0	100.0	4,749
Total	89.1	3.6	0.8	0.5	0.1	0.0	0.2	2.2	2.3	0.1	0.5	0.3	0.4	0.0	100.0	20,926
							NON-ITNs									
Total	na	na	na	na	0.0	0.0	0.3	91.3	1.4	0.0	0.5	4.7	1.4	0.2	100.0	1,057
							ALL MOSQUITO NETS									
Total	84.8	3.4	0.8	0.5	0.1	0.0	0.2	6.5	2.2	0.1	0.5	0.5	0.4	0.1	100.0	21,983

ANC = antenatal care; IRS = indoor residual spraying; NGO = nongovernmental organisation; PNFP = private not for profit; SMC = seasonal malaria chemoprevention

[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa.

[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.3 Access to an insecticide-treated net

Percentage of the de facto population with access to an insecticide-treated net (ITN) in the household, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage of the de facto population with access to an ITN[1,2]	Number of persons
Residence		
Urban	71.7	16,798
Rural	71.2	27,393
Subregion		
Kampala	63.9	1,015
Buganda	70.0	12,289
South Buganda	68.4	7,169
North Buganda	72.3	5,120
Busoga	68.0	3,797
Bukedi	69.7	2,586
Elgon	76.4	2,060
Teso	79.6	2,368
Lango	78.2	2,437
Acholi	60.1	1,953
Karamoja	58.0	1,424
West Nile	71.5	2,918
Bunyoro	76.2	2,989
Toro	68.0	3,141
Ankole	77.2	3,488
Kigezi	78.4	1,725
Special areas		
IRS districts[3]	73.2	4,983
SMC districts[4]	58.0	1,424
High altitude districts[5]	77.2	3,572
Wealth quintile		
Lowest	65.7	8,838
Second	69.1	8,845
Middle	74.9	8,854
Fourth	74.9	8,842
Highest	72.3	8,812
Total	71.4	44,191

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

[2] Percentage of the de facto household population who could sleep under an ITN if each ITN in the household were used by up to two people

[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.4 Use of mosquito nets by persons in the household

Percentages of the de facto household population who slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN) the night before the survey; and among the de facto household population in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Uganda MIS 2024–25

	Household population			Household population in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of persons	Percentage who slept under an ITN[1] last night	Number of persons
Age					
<5	71.8	68.6	7,318	78.3	6,408
5–14	62.5	60.5	13,906	69.2	12,151
15–34	66.6	62.5	13,144	73.9	11,129
35–49	77.6	72.9	4,990	84.6	4,295
50+	76.5	73.8	4,796	84.8	4,178
Don't know/missing	(74.1)	(74.1)	37	(84.8)	33
Sex					
Male	66.4	63.3	21,269	73.5	18,303
Female	70.5	67.2	22,922	77.4	19,891
Residence					
Urban	70.9	64.5	16,798	76.6	14,134
Rural	67.0	65.8	27,393	74.9	24,060
Subregion					
Kampala	70.8	55.2	1,015	76.1	737
Buganda	68.9	61.9	12,289	75.5	10,078
South Buganda	68.9	59.2	7,169	74.8	5,677
North Buganda	68.9	65.7	5,120	76.4	4,401
Busoga	65.6	64.8	3,797	77.6	3,173
Bukedi	66.9	65.0	2,586	72.3	2,322
Elgon	67.8	67.5	2,060	74.5	1,865
Teso	78.3	77.9	2,368	81.9	2,254
Lango	76.9	76.8	2,437	81.6	2,294
Acholi	60.3	58.3	1,953	69.7	1,633
Karamoja	55.6	54.9	1,424	69.4	1,126
West Nile	70.1	69.5	2,918	75.2	2,695
Bunyoro	71.0	69.7	2,989	75.7	2,752
Toro	56.6	55.3	3,141	66.5	2,611
Ankole	75.2	71.6	3,488	79.9	3,126
Kigezi	69.7	68.1	1,725	76.9	1,528
Special areas					
IRS districts[2]	70.6	69.6	4,983	75.9	4,573
SMC districts[3]	55.6	54.9	1,424	69.4	1,126
High altitude districts[4]	68.3	67.3	3,572	75.2	3,199
Wealth quintile					
Lowest	65.2	64.9	8,838	74.8	7,670
Second	64.1	63.6	8,845	73.2	7,687
Middle	69.4	68.6	8,854	77.0	7,887
Fourth	69.6	66.8	8,842	76.5	7,729
Highest	74.2	62.6	8,812	76.3	7,221
Total	68.5	65.3	44,191	75.5	38,194

Note: Figures in parentheses are based on 25–49 unweighted cases.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).
[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.5 Use of existing insecticide-treated nets

Percentage of insecticide-treated nets (ITNs) that were used by anyone the night before the survey, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage of existing ITNs[1] used last night	Number of ITNs[1]
Residence		
Urban	80.0	8,325
Rural	80.3	12,600
Subregion		
Kampala	77.3	481
Buganda	80.9	6,038
South Buganda	80.5	3,468
North Buganda	81.5	2,570
Busoga	83.6	1,671
Bukedi	81.0	1,115
Elgon	74.5	1,040
Teso	92.7	1,157
Lango	89.2	1,227
Acholi	90.0	690
Karamoja	69.4	517
West Nile	75.0	1,359
Bunyoro	72.3	1,470
Toro	75.8	1,348
Ankole	80.5	1,870
Kigezi	72.8	945
Special areas		
IRS districts[2]	79.9	2,370
SMC districts[3]	69.4	517
High altitude districts[4]	73.0	1,875
Wealth quintile		
Lowest	82.7	3,482
Second	79.3	3,858
Middle	80.5	4,348
Fourth	80.8	4,488
Highest	78.1	4,749
Total	80.2	20,926

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.6 Use of mosquito nets by children

Percentages of children under age 5 who slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN) the night before the survey; and among children under age 5 in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Uganda MIS 2024–25

	Children under age 5 in all households			Children under age 5 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Age in months					
<12	76.0	71.9	1,402	81.3	1,239
12–23	73.4	69.8	1,381	79.8	1,207
24–35	71.1	68.1	1,474	78.5	1,277
36–47	71.5	68.4	1,526	77.8	1,341
48–59	67.5	65.3	1,534	74.6	1,343
Sex					
Male	71.5	67.8	3,696	78.0	3,213
Female	72.1	69.4	3,622	78.7	3,195
Residence					
Urban	74.1	67.1	2,665	79.0	2,265
Rural	70.5	69.5	4,653	78.0	4,144
Subregion					
Kampala	75.1	56.0	139	77.6	100
Buganda	70.5	63.0	1,896	76.3	1,565
South Buganda	71.5	61.6	1,089	77.1	871
North Buganda	69.0	64.9	807	75.4	694
Busoga	71.9	71.3	679	83.8	577
Bukedi	70.6	68.0	477	74.8	434
Elgon	73.5	73.1	349	80.3	318
Teso	77.9	77.5	421	81.7	400
Lango	84.5	84.5	405	88.6	387
Acholi	68.4	67.1	313	78.5	267
Karamoja	61.1	60.7	297	74.8	241
West Nile	73.5	72.0	496	77.6	460
Bunyoro	73.5	72.1	562	76.6	530
Toro	60.9	59.4	526	69.9	447
Ankole	76.4	73.3	486	81.0	439
Kigezi	73.1	71.5	270	79.8	242
Special areas					
IRS districts[2]	73.4	72.0	890	78.6	816
SMC districts[3]	61.1	60.7	297	74.8	241
High altitude districts[4]	72.7	71.8	573	79.4	518
Wealth quintile					
Lowest	70.5	70.1	1,737	79.8	1,527
Second	69.2	68.7	1,520	77.4	1,349
Middle	71.5	70.7	1,431	77.5	1,306
Fourth	73.2	70.1	1,368	80.3	1,194
Highest	75.7	62.4	1,262	76.3	1,032
Total	71.8	68.6	7,318	78.3	6,408

Note: Table is based on children who stayed in the household the night before the interview.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).
[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.7 Use of mosquito nets by pregnant women

Percentages of pregnant women age 15–49 who slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN) the night before the survey; and among pregnant women age 15–49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Uganda MIS 2024–25

	Pregnant women age 15–49 in all households			Pregnant women age 15–49 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of pregnant women	Percentage who slept under an ITN[1] last night	Number of pregnant women
Residence					
Urban	79.8	70.5	253	84.4	211
Rural	75.1	72.9	442	83.3	387
Subregion					
Kampala	(88.6)	(54.5)	18	(80.0)	13
Buganda	73.0	64.9	152	83.4	119
South Buganda	(73.9)	(63.8)	88	(83.2)	67
North Buganda	(71.8)	(66.5)	65	(83.6)	51
Busoga	(73.4)	(71.4)	61	(92.2)	47
Bukedi	76.5	73.7	56	79.3	53
Elgon	75.9	72.2	39	80.2	35
Teso	80.8	79.9	58	84.1	55
Lango	86.1	86.1	53	92.4	49
Acholi	(79.6)	(79.6)	27	(86.0)	25
Karamoja	69.3	68.2	42	78.9	37
West Nile	(72.9)	(72.9)	37	(79.0)	34
Bunyoro	80.8	74.4	54	82.4	49
Toro	(64.7)	(64.7)	40	(70.1)	37
Ankole	(90.7)	(80.2)	38	(96.2)	32
Kigezi	(78.2)	(67.8)	19	*	15
Education					
No education	78.8	78.8	61	88.9	54
Primary	75.6	72.4	425	84.0	366
Secondary	77.4	69.5	174	81.2	149
More than secondary	(85.6)	(68.2)	35	(82.0)	29
Special areas					
IRS districts[2]	80.5	78.4	102	84.0	95
SMC districts[3]	69.3	68.2	42	78.9	37
High altitude districts[4]	77.9	71.5	53	80.8	47
Wealth quintile					
Lowest	77.4	77.4	181	84.6	166
Second	73.3	71.7	154	82.8	133
Middle	68.8	67.9	112	80.9	94
Fourth	78.0	72.2	122	83.6	105
Highest	86.3	68.1	126	86.0	100
Total	76.8	72.0	695	83.7	598

Note: Table is based on women who stayed in the household the night before the interview. Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).
[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.8 Main reason mosquito net was not used the night before the survey

Among insecticide-treated nets (ITNs), non-ITNs, and all mosquito nets, percentage that were not used by anyone the night before the survey; and among mosquito nets that were not used by anyone the night before the survey, percent distribution by the main reason each net was not used, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage of nets not used the night before the survey	Missing	Total number of mosquito nets	Main reason each net was not used the night before the survey													Number of mosquito nets not used the night before the survey
				Too hot	Don't like shape, colour, and/or size	Don't like smell	Unable to hang net	Slept outdoors	Usual user didn't sleep in household last night	No mosquitoes/ no malaria	Extra net/ saving for later	Net too old/ too many holes	No place to hang net	Other	Missing	Total	
								ITNs[1]									
Residence																	
Urban	19.9	0.0	8,325	3.1	0.7	1.6	4.2	0.4	8.8	1.6	67.0	4.8	1.8	6.0	0.0	100.0	1,656
Rural	19.6	0.0	12,600	3.1	0.8	0.8	4.9	0.3	8.4	2.1	63.1	7.1	2.9	6.6	0.0	100.0	2,469
Subregion																	
Kampala	22.7	0.0	481	3.1	3.1	1.9	3.1	0.4	12.6	0.0	65.3	1.9	1.1	7.6	0.0	100.0	109
Buganda	19.0	0.0	6,038	3.1	0.6	1.3	5.7	0.2	10.2	1.8	61.8	3.8	2.9	8.6	0.0	100.0	1,147
South Buganda	19.4	0.0	3,468	4.2	0.3	1.3	7.3	0.3	6.7	2.6	66.6	1.7	2.5	6.4	0.0	100.0	674
North Buganda	18.4	0.0	2,570	1.4	1.0	1.4	3.5	0.0	15.1	0.7	55.0	6.8	3.5	11.6	0.0	100.0	473
Busoga	16.4	0.0	1,671	5.4	0.0	0.9	2.3	0.0	1.8	0.5	80.3	4.7	0.4	3.7	0.0	100.0	273
Bukedi	18.9	0.0	1,115	2.8	0.8	0.8	3.3	0.4	8.3	4.9	65.3	6.7	1.6	5.2	0.0	100.0	211
Elgon	25.5	0.0	1,040	3.0	0.0	1.1	5.1	0.8	5.7	2.9	68.9	3.7	0.5	8.3	0.0	100.0	265
Teso	6.9	0.0	1,157	4.0	0.0	0.0	2.0	0.0	18.6	0.0	68.5	2.0	0.0	5.0	0.0	100.0	80
Lango	10.8	0.0	1,227	1.2	0.7	0.0	1.4	0.0	15.3	0.0	69.5	6.2	5.7	0.0	0.0	100.0	132
Acholi	10.0	0.0	690	4.0	0.0	0.0	0.0	0.0	21.3	0.0	54.2	16.7	0.0	3.7	0.0	100.0	69
Karamoja	30.6	0.0	517	1.2	0.0	0.3	0.6	0.0	3.0	7.3	72.1	7.0	1.2	7.3	0.0	100.0	158
West Nile	24.8	0.0	1,359	2.3	0.3	0.0	2.0	0.3	5.7	1.1	74.4	2.4	4.7	6.8	0.0	100.0	336
Bunyoro	27.7	0.0	1,470	5.3	1.4	0.5	7.4	0.0	3.0	1.6	59.4	16.4	2.4	2.6	0.0	100.0	408
Toro	23.3	0.0	1,348	4.9	3.5	1.5	8.0	0.0	5.2	1.6	45.3	15.0	2.9	12.1	0.0	100.0	314
Ankole	19.5	0.0	1,870	0.0	0.4	3.0	1.7	0.4	16.2	1.4	70.1	3.3	1.8	1.7	0.0	100.0	364
Kigezi	27.2	0.0	945	1.9	0.0	2.1	8.6	2.0	9.0	2.2	61.6	1.9	4.3	6.4	0.0	100.0	257
Special areas																	
IRS districts[2]	19.9	0.0	2,370	1.9	0.2	0.3	2.3	0.2	6.8	1.8	71.7	4.6	2.7	7.5	0.0	100.0	471
SMC districts[3]	30.6	0.0	517	1.2	0.0	0.3	0.6	0.0	3.0	7.3	72.1	7.0	1.2	7.3	0.0	100.0	158
High altitude districts[4]	27.0	0.0	1,875	2.5	0.0	1.6	6.8	1.4	7.5	2.7	65.0	2.3	2.5	7.6	0.0	100.0	506
Wealth quintile																	
Lowest	17.1	0.0	3,482	2.3	0.1	0.3	2.9	0.1	4.3	2.7	68.8	7.8	3.9	6.8	0.0	100.0	596
Second	20.5	0.0	3,858	3.3	0.4	1.1	7.7	0.3	6.2	1.6	60.5	8.9	3.2	6.8	0.0	100.0	792
Middle	19.4	0.0	4,348	3.8	0.5	0.6	4.6	0.2	6.3	1.5	64.4	8.9	2.7	6.6	0.0	100.0	843
Fourth	19.1	0.0	4,488	2.4	1.4	1.4	4.4	0.3	12.5	2.2	63.8	3.8	1.5	6.3	0.0	100.0	859
Highest	21.8	0.0	4,749	3.3	1.1	2.0	3.5	0.5	11.3	1.7	66.4	2.8	1.7	5.6	0.0	100.0	1,035
Total	19.7	0.0	20,926	3.1	0.8	1.2	4.6	0.3	8.5	1.9	64.7	6.2	2.5	6.3	0.0	100.0	4,125
								NON-ITNs									
Total	13.3	0.1	1,057	2.8	0.0	0.0	8.5	0.0	14.8	0.0	63.1	2.4	4.2	3.7	0.5	100.0	141
								ALL MOSQUITO NETS									
Total	19.4	0.0	21,983	3.1	0.7	1.1	4.7	0.3	8.8	1.8	64.6	6.0	2.5	6.3	0.0	100.0	4,266

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.9 Household disposal of mosquito nets

Percentage of households with at least one mosquito net that disposed of any net during the past 12 months and percent distribution of households that disposed of a net in the past 12 months by duration of use prior to disposal, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage that disposed of at least one mosquito net in the past 12 months	Number of households with at least one mosquito net	Length of use prior to disposal of last mosquito net				Total	Number of households that disposed of a mosquito net in the past 12 months
			Less than 2 years	2–4 years	More than 4 years	Don't know		
Residence								
Urban	31.4	3,474	59.7	30.9	7.6	1.9	100.0	1,090
Rural	30.7	5,148	55.4	32.9	9.0	2.7	100.0	1,581
Subregion								
Kampala	35.0	241	62.9	30.7	5.9	0.5	100.0	84
Buganda	39.6	2,575	57.4	34.7	6.8	1.1	100.0	1,018
South Buganda	42.9	1,527	53.2	41.3	4.5	1.0	100.0	655
North Buganda	34.7	1,048	64.9	22.8	11.0	1.4	100.0	363
Busoga	27.2	745	58.4	34.2	7.4	0.0	100.0	202
Bukedi	30.4	433	46.6	38.7	14.1	0.6	100.0	132
Elgon	35.7	371	62.7	30.1	7.2	0.0	100.0	132
Teso	30.0	420	41.8	47.2	11.0	0.0	100.0	126
Lango	16.5	508	47.3	30.8	21.9	0.0	100.0	84
Acholi	19.4	354	52.6	35.7	11.7	0.0	100.0	69
Karamoja	34.3	238	43.6	44.1	11.8	0.6	100.0	82
West Nile	25.4	537	35.3	28.5	8.7	27.6	100.0	136
Bunyoro	29.9	537	67.6	26.6	4.6	1.2	100.0	160
Toro	35.9	573	56.8	25.1	12.6	5.4	100.0	206
Ankole	16.7	727	71.6	20.1	8.3	0.0	100.0	122
Kigezi	32.2	365	86.8	11.7	1.6	0.0	100.0	118
Special areas								
IRS districts[1]	25.2	919	37.4	35.1	15.9	11.6	100.0	232
SMC districts[2]	34.3	238	43.6	44.1	11.8	0.6	100.0	82
High altitude districts[3]	33.7	694	75.8	19.6	4.6	0.0	100.0	234
Wealth quintile								
Lowest	27.6	1,644	45.7	35.5	13.5	5.4	100.0	454
Second	29.8	1,640	54.5	32.1	10.0	3.3	100.0	489
Middle	32.7	1,670	60.3	30.1	8.0	1.6	100.0	547
Fourth	30.2	1,764	55.2	35.8	8.0	1.0	100.0	532
Highest	34.1	1,903	66.1	28.2	4.3	1.4	100.0	649
Total	31.0	8,622	57.2	32.1	8.4	2.4	100.0	2,671

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.10 Main reason mosquito net was disposed of/repurposed

Among households that disposed of a net in the past 12 months, percent distribution by the main reason the net was disposed of, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Main reason the net was disposed of					Total	Number of households that disposed of net in past 12 months
	Torn	No longer repelled mosquitoes	Got a new one	Other[1]	Don't know		
Residence							
Urban	86.1	2.7	5.5	5.4	0.3	100.0	1,090
Rural	90.6	1.1	4.6	3.6	0.1	100.0	1,581
Subregion							
Kampala	82.2	0.5	7.4	9.4	0.5	100.0	84
Buganda	85.8	2.1	5.7	6.1	0.2	100.0	1,018
South Buganda	81.8	3.0	6.7	8.1	0.3	100.0	655
North Buganda	93.1	0.5	3.9	2.5	0.0	100.0	363
Busoga	92.1	3.9	2.8	1.2	0.0	100.0	202
Bukedi	88.4	1.9	7.7	1.9	0.0	100.0	132
Elgon	89.9	0.0	4.2	6.0	0.0	100.0	132
Teso	97.7	0.5	0.0	1.2	0.6	100.0	126
Lango	90.9	1.1	4.4	3.6	0.0	100.0	84
Acholi	93.4	0.0	1.8	4.8	0.0	100.0	69
Karamoja	93.1	0.0	4.6	2.3	0.0	100.0	82
West Nile	89.6	2.6	4.6	2.6	0.6	100.0	136
Bunyoro	88.8	0.6	7.0	3.5	0.0	100.0	160
Toro	93.1	2.3	4.0	0.6	0.0	100.0	206
Ankole	87.7	1.0	9.4	1.9	0.0	100.0	122
Kigezi	88.2	1.7	1.2	8.9	0.0	100.0	118
Special areas							
IRS districts[2]	90.1	3.9	4.7	1.4	0.0	100.0	232
SMC districts[3]	93.1	0.0	4.6	2.3	0.0	100.0	82
High altitude districts[4]	89.1	0.9	3.0	7.1	0.0	100.0	234
Wealth quintile							
Lowest	91.7	0.8	4.3	2.8	0.4	100.0	454
Second	88.9	1.1	5.4	4.6	0.0	100.0	489
Middle	89.9	2.3	3.7	4.2	0.0	100.0	547
Fourth	89.9	2.2	3.6	4.3	0.0	100.0	532
Highest	84.8	2.0	7.4	5.4	0.4	100.0	649
Total	88.8	1.7	5.0	4.4	0.2	100.0	2,671

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes categories: put into storage/end of rainy season, installed screens, itching/skin, irritation/health problems, can't breathe/too hot, toxic chemicals

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.11 Means of net disposal/repurposing

Among households that disposed of a net in the past 12 months, percent distribution by how the net was disposed of/repurposed, according to background characteristics, Uganda MIS 2024–25

Background characteristic	How net was disposed of/repurposed							Total	Number of households that disposed of net in past 12 months
	Garbage collection centre/point	Repurposed for farming activities	Used to make ropes	Used to make footballs	Used for bathing/ washing	Other[1]	Don't know		
Residence									
Urban	49.6	15.3	3.6	1.8	3.9	25.6	0.2	100.0	1,090
Rural	42.0	15.1	7.7	2.3	4.0	28.2	0.8	100.0	1,581
Subregion									
Kampala	71.8	8.9	0.0	0.5	2.5	16.3	0.0	100.0	84
Buganda	54.4	14.4	1.3	1.7	1.4	26.6	0.3	100.0	1,018
South Buganda	54.9	13.0	1.0	1.7	1.7	27.7	0.0	100.0	655
North Buganda	53.4	16.8	1.8	1.8	0.9	24.5	0.9	100.0	363
Busoga	53.6	17.7	2.5	3.7	5.3	17.2	0.0	100.0	202
Bukedi	32.2	11.6	5.1	1.2	3.7	45.6	0.7	100.0	132
Elgon	22.3	12.1	6.8	2.1	1.1	55.6	0.0	100.0	132
Teso	24.4	5.5	19.0	2.5	3.5	44.5	0.6	100.0	126
Lango	47.6	11.0	2.2	1.1	3.8	30.0	4.4	100.0	84
Acholi	44.9	11.8	14.4	1.0	6.3	21.6	0.0	100.0	69
Karamoja	37.8	11.2	12.4	1.8	6.5	30.4	0.0	100.0	82
West Nile	23.8	28.3	9.0	4.1	16.7	17.5	0.7	100.0	136
Bunyoro	51.5	15.4	5.7	3.3	2.9	20.5	0.6	100.0	160
Toro	30.3	27.2	25.4	1.3	4.0	11.1	0.6	100.0	206
Ankole	58.0	13.2	2.1	3.2	12.4	11.2	0.0	100.0	122
Kigezi	25.4	13.0	3.6	1.8	4.8	49.1	2.3	100.0	118
Special areas									
IRS districts[2]	30.2	12.9	9.4	4.8	10.3	31.1	1.1	100.0	232
SMC districts[3]	37.8	11.2	12.4	1.8	6.5	30.4	0.0	100.0	82
High altitude districts[4]	23.9	12.9	5.6	2.1	3.0	51.3	1.2	100.0	234
Wealth quintile									
Lowest	33.1	16.4	11.4	3.0	6.2	28.5	1.4	100.0	454
Second	36.3	17.9	8.2	1.7	2.6	32.6	0.5	100.0	489
Middle	46.4	13.8	6.3	2.7	3.6	26.8	0.4	100.0	547
Fourth	49.9	14.9	4.3	0.8	4.4	25.4	0.2	100.0	532
Highest	55.0	13.5	1.7	2.2	3.5	23.7	0.4	100.0	649
Total	45.1	15.2	6.0	2.1	4.0	27.1	0.5	100.0	2,671

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes categories: repurposed for window screening, used to make swings/furniture, repurposed for goal posts, used as a fishing net, used to make clothing/wedding veil

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.12 Indoor residual spraying against mosquitoes

Percentage of households in which someone had come into the dwelling to spray the interior walls against mosquitoes in the past 12 months, the percentage of households with at least one insecticide-treated net (ITN) and/or indoor residual spraying (IRS) in the past 12 months, and the percentage of households with at least one ITN for every two persons and/or IRS in the past 12 months; among households with IRS in the past 12 months, percentage of households sprayed by a government programme or nongovernmental organisation (NGO) and percentage paying for IRS; and percentage of the de jure household population whose dwelling had IRS in the past 12 months, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage of households with IRS[1] in the past 12 months	Percentage of households with at least one ITN[2] and/or IRS in the past 12 months	Percentage of households with at least one ITN for every two persons and/or IRS in the past 12 months	Number of households	Households with IRS in the past 12 months				Percentage of usual household residents whose dwelling had IRS in the past 12 month	Number of persons
					Percentage sprayed by a government programme or NGO	Percentage sprayed by a private company	Percentage paying for IRS	Number of households with IRS in the past 12 months		
Residence										
Urban	7.6	81.9	61.1	3,792	80.2	9.0	14.7	288	9.0	17,010
Rural	11.9	86.1	59.2	5,666	95.1	0.9	4.4	672	12.8	27,769
Subregion										
Kampala	1.7	69.4	53.7	273	*	*	*	5	1.8	1,024
Buganda	1.8	78.6	57.4	2,867	(14.0)	(32.9)	(50.5)	52	2.2	12,422
South Buganda	2.4	76.3	56.3	1,706	*	*	*	40	2.9	7,243
North Buganda	1.0	82.1	59.1	1,162	*	*	*	11	1.1	5,178
Busoga	15.7	83.6	58.6	822	97.1	1.9	3.9	129	16.7	3,841
Bukedi	67.0	94.7	84.0	464	95.4	0.3	2.6	311	67.9	2,610
Elgon	1.5	88.9	60.8	392	*	*	*	6	1.8	2,114
Teso	9.5	95.6	63.0	433	100.0	0.0	13.0	41	9.0	2,462
Lango	17.5	92.3	63.1	539	100.0	0.0	4.7	95	19.6	2,472
Acholi	1.4	79.9	41.1	402	*	*	*	6	1.2	1,966
Karamoja	3.3	78.1	40.8	272	*	*	*	9	4.2	1,438
West Nile	50.2	94.4	73.7	570	97.6	0.5	4.3	286	49.3	2,952
Bunyoro	0.4	89.0	57.5	580	*	*	*	2	0.7	3,003
Toro	1.8	81.2	53.0	668	*	*	*	12	1.3	3,185
Ankole	0.7	86.4	64.8	787	*	*	*	6	0.7	3,541
Kigezi	0.6	88.0	67.1	389	*	*	*	2	0.6	1,750
Special areas										
IRS districts[3]	80.6	96.9	90.7	968	97.3	0.1	3.4	780	82.3	5,040
SMC districts[4]	3.3	78.1	40.8	272	*	*	*	9	4.2	1,438
High altitude districts[5]	1.0	88.3	63.8	739	*	*	*	8	1.2	3,646
Wealth quintile										
Lowest	16.9	86.3	54.2	1,840	95.8	0.5	5.8	311	17.2	8,954
Second	12.0	84.9	57.1	1,830	94.6	0.6	2.2	219	13.2	8,964
Middle	9.9	87.0	62.3	1,818	97.7	0.6	2.6	180	11.1	8,948
Fourth	6.4	84.9	62.6	1,932	92.8	0.4	6.4	123	8.2	8,955
Highest	6.2	79.5	63.2	2,039	58.9	21.3	29.1	127	7.0	8,958
Total	10.1	84.4	60.0	9,458	90.6	3.3	7.5	960	11.4	44,779

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] IRS is limited to spraying conducted by a government, private, or nongovernmental organisation.
[2] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).
[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.13 Perceived availability of malaria services by village health teams

Percentages of households in which the respondent reported that a village health team (VHT) member or community health worker (CHW) conducts malaria testing in their village or community and distributes malaria medicines in their village or community; and among households that reported the presence of a VHT or CHW who distributes malaria medicines in their village or community, the percentage that reported that the VHT or CHW currently has malaria medicines available and the percentage who reported that they do not know whether the VHT or CHW currently has malaria medicines available, according to background characteristics, Uganda MIS 2024–25

				Households who reported presence of a VHT or CHW who distributes malaria medications in their village or community		
Background characteristic	Percentage of households that reported that a VHT or CHW conducts malaria testing in their village or community	Percentage of households that reported that a VHT or CHW distributes malaria medicines	Number of households	Percentage that reported that the VHT or CHW currently has medicines available	Percentage that reported that they don't know if the VHT or CHW currently has medicines available	Number of households that reported presence of a VHT or CHW who distributes malaria medicines in their village or community
Residence						
Urban	30.1	47.2	3,792	43.3	20.7	1,791
Rural	38.3	57.4	5,666	41.2	16.4	3,250
Subregion						
Kampala	9.8	15.7	273	35.0	27.2	43
Buganda	32.1	47.0	2,867	52.	16.6	1,347
South Buganda	30.3	47.7	1,706	47.2	15.3	814
North Buganda	34.6	45.9	1,162	60.3	18.5	533
Busoga	22.1	44.6	822	45.4	16.1	366
Bukedi	54.5	81.3	464	39.5	18.0	377
Elgon	15.2	34.9	392	15.5	9.4	137
Teso	45.2	59.2	433	34.5	18.6	257
Lango	64.5	77.1	539	25.8	12.3	415
Acholi	54.3	75.3	402	34.1	1.2	302
Karamoja	76.1	87.8	272	68.9	8.3	239
West Nile	66.4	82.9	570	45.8	28.1	472
Bunyoro	10.9	34.6	580	15.0	51.1	201
Toro	22.8	35.9	668	54.6	12.5	240
Ankole	36.2	65.2	787	36.7	23.7	512
Kigezi	5.5	34.0	389	21.6	15.8	132
Special areas						
IRS districts[1]	57.3	80.4	968	41.3	22.6	777
SMC districts[2]	76.1	87.8	272	68.9	8.3	239
High altitude districts[3]	9.8	35.4	739	17.5	12.9	262
Wealth quintile						
Lowest	52.9	71.4	1,840	41.6	15.1	1,315
Second	33.7	53.6	1,830	39.3	17.9	980
Middle	32.9	53.1	1,818	41.8	19.2	965
Fourth	30.2	48.4	1,932	42.5	18.7	935
Highest	26.3	41.5	2,039	45.0	20.1	845
Total	35.0	53.3	9,458	41.9	17.9	5,041

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.14 Antenatal care

Percent distribution of women age 15–49 who had a live birth in the 2 years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent live birth and percentage receiving ANC from a skilled provider for the most recent live birth, according to background characteristics, Uganda MIS 2024–25

	ANC provider										
Background characteristic	Doctor	Nurse/ midwife	Auxiliary nurse/ midwife	Community health worker/ fieldworker	Other health worker	Traditional birth attendant	Other	No ANC	Total	Percentage receiving ANC from a skilled provider[1]	Number of women
Age at birth											
<20	12.4	82.1	2.4	0.7	0.0	0.0	0.0	2.4	100.0	97.6	405
20–34	15.8	77.6	2.1	1.6	0.3	0.2	0.2	2.2	100.0	97.1	1,844
35–49	16.0	78.5	0.6	2.8	0.0	0.0	0.7	1.4	100.0	98.0	325
Residence											
Urban	21.4	72.7	1.9	2.6	0.2	0.0	0.2	1.1	100.0	98.4	939
Rural	11.8	81.7	2.1	1.1	0.2	0.2	0.2	2.7	100.0	96.6	1,635
Subregion											
Kampala	35.6	60.7	0.7	0.0	0.0	0.0	0.0	3.0	100.0	97.0	59
Buganda	29.4	60.7	1.6	4.1	0.6	0.3	0.8	2.4	100.0	95.8	686
South Buganda	31.9	59.7	1.1	2.8	0.6	0.6	1.1	2.2	100.0	95.6	390
North Buganda	26.1	62.1	2.3	5.7	0.6	0.0	0.5	2.8	100.0	96.2	295
Busoga	19.2	78.1	1.0	0.0	0.0	0.0	0.0	1.7	100.0	98.3	234
Bukedi	2.9	91.8	4.9	0.0	0.0	0.0	0.0	0.5	100.0	99.5	172
Elgon	11.8	82.5	5.7	0.0	0.0	0.0	0.0	0.0	100.0	100.0	116
Teso	0.9	89.0	5.3	1.0	0.0	0.0	0.0	3.8	100.0	96.2	164
Lango	9.0	88.1	2.3	0.6	0.0	0.0	0.0	0.0	100.0	100.0	137
Acholi	16.5	80.2	0.7	0.0	0.7	0.0	0.0	1.9	100.0	97.4	102
Karamoja	4.1	92.4	1.0	1.5	0.0	0.0	0.0	1.0	100.0	99.0	96
West Nile	8.5	86.4	2.9	0.6	0.0	0.0	0.0	1.7	100.0	98.3	165
Bunyoro	7.5	81.4	0.0	3.5	0.5	0.5	0.0	6.7	100.0	92.4	214
Toro	7.8	88.3	0.0	1.3	0.0	0.0	0.0	2.6	100.0	97.4	175
Ankole	10.6	87.1	2.3	0.0	0.0	0.0	0.0	0.0	100.0	100.0	158
Kigezi	12.3	86.2	0.0	0.0	0.0	0.0	0.0	1.5	100.0	98.5	95
Education											
No education	13.4	80.7	1.1	1.3	0.3	0.0	0.0	3.1	100.0	96.6	243
Primary	11.5	82.6	2.0	1.5	0.1	0.2	0.0	2.2	100.0	97.5	1,434
Secondary	18.9	73.3	2.6	2.1	0.5	0.0	0.5	2.0	100.0	97.0	734
More than secondary	34.8	61.0	0.0	1.8	0.0	0.0	1.2	1.1	100.0	97.7	163
Special areas											
IRS districts[2]	5.4	89.9	3.1	0.6	0.0	0.0	0.0	1.1	100.0	98.9	308
SMC districts[3]	4.1	92.4	1.0	1.5	0.0	0.0	0.0	1.0	100.0	99.0	96
High altitude districts[4]	11.0	84.8	3.4	0.0	0.0	0.0	0.0	0.7	100.0	99.3	193
Wealth quintile											
Lowest	5.2	88.8	1.5	0.5	0.1	0.1	0.0	3.7	100.0	95.6	655
Second	12.1	81.0	2.6	1.5	0.2	0.5	0.0	2.1	100.0	95.7	492
Middle	13.7	80.9	2.4	1.5	0.0	0.0	0.0	1.5	100.0	97.0	467
Fourth	17.7	75.6	1.8	3.0	0.4	0.0	0.8	0.8	100.0	95.1	471
Highest	31.0	62.2	1.7	2.2	0.4	0.0	0.4	2.0	100.0	94.9	489
Total	15.3	78.4	2.0	1.7	0.2	0.1	0.2	2.1	100.0	97.3	2,574

Notes: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation. Stillbirths are foetal deaths in pregnancies lasting 28 or more weeks. When pregnancy duration is reported in months, stillbirths are foetal deaths in pregnancies lasting 7 or more months.

[1] Skilled provider includes doctor, nurse, midwife, medical assistant, and clinical officer.

[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.15 Number of antenatal care visits and timing of first visit

Percent distribution of women age 15–49 who had a live birth in the 2 years preceding the survey by number of antenatal care (ANC) visits during pregnancy for the most recent live birth, and by the timing of the first visit; and among women with ANC, median months pregnant at first visit, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Number of ANC visits								Number of months pregnant at time of first ANC visit						Number of women	Median months pregnant at first visit (for those with ANC)	Number of women with ANC
	None	1	2–3	4–7	8+	Don't know	Total	4+ ANC visits	No ANC	<4	4–6	7+	Don't know	Total			
Age at birth																	
<20	2.4	0.6	22.5	67.9	6.6	0.0	100.0	74.5	2.4	38.6	56.4	2.6	0.0	100.0	405	4.4	395
20–34	2.2	0.9	17.3	71.7	7.5	0.4	100.0	79.2	2.2	45.1	50.0	2.7	0.0	100.0	1,844	4.1	1,803
35–49	1.4	1.8	22.4	67.1	7.3	0.1	100.0	74.4	1.4	37.9	55.5	4.9	0.3	100.0	325	4.5	320
Residence																	
Urban	1.1	0.7	17.9	71.9	8.3	0.1	100.0	80.2	1.1	44.1	51.1	3.6	0.1	100.0	939	4.2	929
Rural	2.7	1.2	19.3	69.7	6.8	0.4	100.0	76.5	2.7	42.6	52.1	2.6	0.0	100.0	1,635	4.2	1,590
Subregion																	
Kampala	3.0	0.7	19.3	66.7	8.9	1.5	100.0	75.6	3.0	45.2	45.2	5.9	0.7	100.0	59	4.1	57
Buganda	2.4	1.2	19.1	73.0	4.0	0.3	100.0	77.0	2.4	39.5	55.0	3.1	0.0	100.0	686	-	669
South Buganda	2.2	1.2	17.9	75.9	2.9	0.0	100.0	78.8	2.2	42.2	52.8	2.9	0.0	100.0	390	4.3	382
North Buganda	2.8	1.2	20.8	69.2	5.4	0.6	100.0	74.6	2.8	36.0	57.9	3.4	0.0	100.0	295	4.5	287
Busoga	1.7	1.1	13.5	76.5	6.2	1.1	100.0	82.7	1.7	52.1	43.5	2.8	0.0	100.0	234	3.9	230
Bukedi	0.5	1.0	23.9	68.3	6.3	0.0	100.0	74.7	0.5	39.1	57.6	2.8	0.0	100.0	172	4.4	171
Elgon	0.0	1.2	23.5	62.8	12.5	0.0	100.0	75.3	0.0	40.5	53.9	5.5	0.0	100.0	116	4.5	116
Teso	3.8	1.0	31.7	60.1	3.4	0.0	100.0	63.5	3.8	40.7	53.2	1.9	0.4	100.0	164	4.3	158
Lango	0.0	0.7	13.7	71.4	14.2	0.0	100.0	85.7	0.0	57.8	40.0	2.2	0.0	100.0	137	3.7	137
Acholi	1.9	0.0	7.6	73.5	17.0	0.0	100.0	90.5	1.9	47.7	49.0	1.4	0.0	100.0	102	4.0	100
Karamoja	1.0	1.0	23.3	65.0	9.6	0.0	100.0	74.7	1.0	57.8	40.2	1.0	0.0	100.0	96	3.7	96
West Nile	1.7	0.0	9.1	73.6	14.5	1.2	100.0	88.1	1.7	55.6	41.7	1.0	0.0	100.0	165	3.8	162
Bunyoro	6.7	2.1	24.6	62.7	4.0	0.0	100.0	66.6	6.7	34.3	53.3	5.7	0.0	100.0	214	4.6	200
Toro	2.6	0.0	15.1	78.8	3.6	0.0	100.0	82.4	2.6	26.1	69.4	1.8	0.0	100.0	175	4.5	171
Ankole	0.0	0.8	17.8	70.7	10.7	0.0	100.0	81.4	0.0	47.8	49.7	2.5	0.0	100.0	158	4.1	158
Kigezi	1.5	2.3	17.9	69.1	9.3	0.0	100.0	78.3	1.5	42.7	52.1	3.8	0.0	100.0	95	4.2	94
Education																	
No education	3.1	2.0	23.1	65.3	6.4	0.2	100.0	71.7	3.1	45.3	48.8	2.6	0.2	100.0	243	4.1	236
Primary	2.2	1.0	20.4	69.1	7.0	0.3	100.0	76.1	2.2	41.9	52.7	3.3	0.0	100.0	1,434	4.3	1,403
Secondary	2.0	0.8	15.5	74.0	7.5	0.2	100.0	81.4	2.0	41.2	53.8	2.9	0.1	100.0	734	4.3	719
More than secondary	1.1	0.0	12.6	74.8	11.5	0.0	100.0	86.3	1.1	60.3	38.1	0.5	0.0	100.0	163	3.7	161
Special areas																	
IRS districts[1]	1.1	1.4	16.3	70.7	10.0	0.6	100.0	80.7	1.1	51.3	44.4	3.3	0.0	100.0	308	3.9	304
SMC districts[2]	1.0	1.0	23.3	65.0	9.6	0.0	100.0	74.7	1.0	57.8	40.2	1.0	0.0	100.0	96	3.7	96
High altitude districts[3]	0.7	1.8	20.8	65.4	11.2	0.0	100.0	76.6	0.7	42.7	52.6	4.0	0.0	100.0	193	4.3	191
Wealth quintile																	
Lowest	3.7	1.3	18.0	68.0	8.8	0.3	100.0	76.8	3.7	43.7	49.6	2.9	0.1	100.0	655	4.2	631
Second	2.1	1.3	22.7	66.4	7.1	0.4	100.0	73.5	2.1	38.7	56.1	3.0	0.0	100.0	492	4.4	482
Middle	1.5	0.6	19.3	72.9	5.8	0.0	100.0	78.6	1.5	41.3	54.3	2.9	0.0	100.0	467	4.3	460
Fourth	0.8	1.0	18.7	72.2	7.1	0.3	100.0	79.2	0.8	43.3	53.4	2.6	0.0	100.0	471	4.2	467
Highest	2.0	0.7	15.3	74.1	7.4	0.4	100.0	81.5	2.0	48.6	45.9	3.3	0.1	100.0	489	4.0	479
Total	2.1	1.0	18.8	70.5	7.3	0.3	100.0	77.8	2.1	43.2	51.7	2.9	0.0	100.0	2,574	4.2	2,518

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.16 Use of intermittent preventive treatment in pregnancy

Percentage of women age 15–49 with a live birth and/or a stillbirth in the 2 years preceding the survey who, during the pregnancy that resulted in the last live birth or stillbirth, received one or more doses of SP/Fansidar, received two or more doses of SP/Fansidar, and received three or more doses of SP/Fansidar, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage who received one or more doses of SP/Fansidar	Percentage who received two or more doses of SP/Fansidar	Percentage who received three or more doses of SP/Fansidar	Number of women with a live birth and/or a stillbirth in the 2 years preceding the survey
Residence				
Urban	96.3	87.8	74.8	939
Rural	94.8	86.7	72.3	1,635
Subregion				
Kampala	88.9	80.7	68.9	59
Buganda	92.3	82.9	70.8	686
South Buganda	92.7	83.0	70.3	390
North Buganda	91.8	82.9	71.5	295
Busoga	97.8	89.7	70.1	234
Bukedi	98.1	90.3	72.5	172
Elgon	96.4	87.4	75.1	116
Teso	97.5	90.6	79.5	164
Lango	96.4	86.6	70.9	137
Acholi	95.6	86.0	62.6	102
Karamoja	97.5	92.9	81.7	96
West Nile	95.6	91.7	81.8	165
Bunyoro	95.9	88.4	69.3	214
Toro	96.3	92.2	82.4	175
Ankole	96.7	84.1	76.8	158
Kigezi	96.4	82.3	65.4	95
Education				
No education	96.6	88.3	73.6	243
Primary	94.9	86.6	70.8	1,434
Secondary	95.8	87.6	77.3	734
More than secondary	95.5	86.9	74.7	163
Special areas				
IRS districts[1]	97.5	89.0	76.0	308
SMC districts[2]	97.5	92.9	81.7	96
High altitude districts[3]	96.1	85.3	71.6	193
Wealth quintile				
Lowest	96.5	87.3	72.0	655
Second	96.0	88.8	74.5	492
Middle	93.2	84.2	70.8	467
Fourth	95.1	88.6	74.3	471
Highest	95.6	86.3	74.6	489
Total	95.4	87.1	73.2	2,574

Notes: Stillbirths are foetal deaths in pregnancies lasting 28 or more weeks. When pregnancy duration is reported in months, stillbirths are foetal deaths in pregnancies lasting 7 or more months. For women who had both a live birth and a stillbirth in the 2 years preceding the survey, data are tabulated for the most recent birth only.

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention; SP = sulphadoxine-pyrimethamine

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 3.17 Reasons for taking fewer than recommended number of doses of sulphadoxine-pyrimethamine/Fansidar

Among women with a live birth in the 2 years preceding the survey who took SP/Fansidar fewer than three times during the pregnancy for their most recent birth, reason they took fewer than three doses, Uganda MIS 2024–25

Reason for taking SP/ Fansidar less than three times[1]	Residence		
	Urban	Rural	Total
Facility too far	4.4	8.2	6.9
Had no money	1.7	6.8	5.0
Side effects	8.1	4.1	5.5
Not aware had to take more	28.5	31.9	30.7
Did not want to take	6.4	3.6	4.5
Not given	32.6	35.6	34.6
Not available	8.5	11.4	10.4
Tastes/smells bad	2.8	2.2	2.4
Provider attitude	0.7	0.8	0.8
Other	9.5	8.4	8.8
Don’t know	13.2	6.5	8.8
Number of women who took SP/Fansidar fewer than three times	237	454	690

SP = sulphadoxine-pyrimethamine
[1] Percentages may add to more than 100% since women can report more than one reason.

MALARIA IN CHILDREN 4

Key Findings

- ***Fever prevalence:*** 31% of children under age 5 had a fever in the 2 weeks before the survey.
- ***Care seeking for fever:*** Caretakers of children with fever sought advice or treatment for 84% of the children in the 2 weeks before the survey. Only 54% sought this help the same or next day.
- ***Source of advice or treatment:*** Among children with recent fever for whom treatment was sought, 42% received advice or treatment from the public sector, 61% from the private sector, and only 1% elsewhere.
- ***Testing:*** 57% of children under age 5 with a fever in the 2 weeks preceding the survey had blood taken from a finger or heel for testing.
- ***Type of antimalarial drug used:*** Among children under age 5 with a recent fever who received an antimalarial, 87% received an artemisinin-based combination therapy (ACT).
- ***Malaria prevalence by microscopy:*** About 13% of children age 0–59 months tested positive for malaria via microscopy.
- ***Malaria speciation:*** Although *Plasmodium falciparum* is still dominant, the presence of *P. malariae* and *P. ovale* has increased since 2018–19.

This chapter presents data useful for measuring the prevalence of malaria parasites in the population as well as assessing how well fever management strategies are implemented. Specific topics include care seeking for febrile children, diagnostic testing of children with fever, and therapeutic use of antimalarial drugs. Prevalence of malaria among children age 6–59 months was also assessed.

4.1 Care Seeking for Fever in Children

Care seeking for children under age 5 with fever

Percentage of children under age 5 with a fever in the 2 weeks before the survey for whom advice or treatment was sought from a health provider, a health facility, or a private drug outlet

Sample: Children under age 5 with a fever in the 2 weeks before the survey

A key case management objective of the *Uganda Malaria Reduction and Elimination Strategic Plan 2021–2025* (UMRESP) (Uganda National Malaria Control Division 2023) was to ensure that at least 95% of suspected malaria cases have access to confirmatory diagnosis and receive effective treatment. Fever is a key symptom of malaria and other acute infections in children. According to the UMRESP, all fevers require confirmation of the presence of parasites by a malaria test and, if the presence of parasites is confirmed, prompt and effective treatment to prevent morbidity and mortality.

Thirty-one percent of children under age 5 had fever in the 2 weeks preceding the survey. Advice or treatment was sought for 84% of the children with fever in the 2 weeks preceding the survey. Fifty-four

percent received timely care (advice or treatment sought the same or next day) following fever onset (**Table 4.1**).

Among children with recent fever for whom advice or treatment was sought, 42% had advice or treatment sought from a public sector facility and 60% had it sought from a private sector facility. The most common sources of advice or treatment for children with fever were private hospitals/clinics (45%), government health centres (27%), and pharmacies/drug shops (15%) (**Table 4.2**).

Among children under age 5 with recent fever for whom care was not sought, the most common reasons reported for not seeking care were having no money (33%), already having medicine at home (23%), and the child not being very ill (22%) (**Table 4.3**).

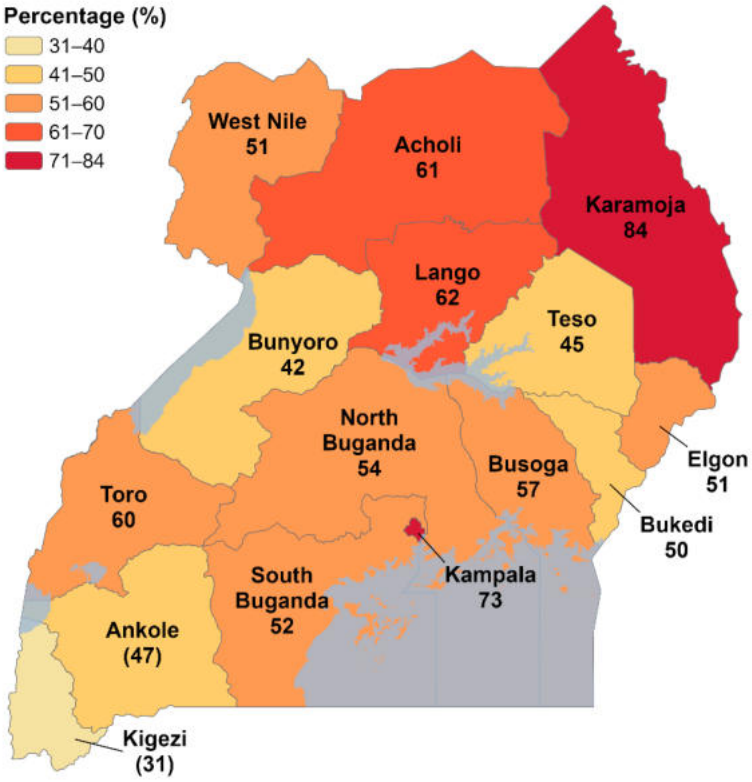
Trends: The percentage of children with fever for whom care was sought in a timely manner (the same or next day following fever onset) increased slightly from 54% in the 2018–19 Uganda Malaria Indicator Survey (UMIS) to 57% in the 2024–25 UMIS.

Patterns by background characteristics

- The percentage of children under age 5 with fever for whom advice or treatment was sought was highest among children whose mothers had more than secondary education (93%) and lowest among those whose mothers had primary education or no education (83% each).
- Timely care seeking was highest in Karamoja (84%) (notably higher than the national average) and lowest in Bunyoro (42%) (**Map 4.1**).

Map 4.1 **Timely care seeking for children with fever by subregion**

Percentage of children under age 5 with recent fever for whom advice or treatment was sought the same or next day



4.2 Diagnostic Testing of Children with Fever

Diagnosis of malaria in children under age 5 with fever

Percentage of children under age 5 with a fever in the 2 weeks before the survey who had blood taken from a finger or heel for testing (a proxy measure of diagnostic testing for malaria)

Sample: Children under age 5 with a fever in the 2 weeks before the survey

The National Malaria Control Division's (NMCD's) policy recommends prompt parasitological confirmation by microscopy or, alternatively, by rapid diagnostic test (RDT) for all patients suspected of having malaria, before treatment is started. Adherence to this policy cannot be directly measured through household surveys; however, during the 2024–25 UMIS, women age 15–49 with children under age 5 who had a fever in the 2 weeks before the survey were asked if the children had blood taken from a finger or heel for testing during the illness. This information is used as a proxy measure for adherence to the policy of conducting diagnostic testing for all suspected malaria cases.

In the 2024–25 UMIS, 57% of children under age 5 with a fever in the 2 weeks preceding the survey had blood taken from a finger or heel for testing (**Table 4.1**).

Trends: The proportion of children who were tested for malaria increased from 51% in the 2018–19 UMIS to 57% in the 2024–25 UMIS.

Patterns by background characteristics

- In urban areas, 60% of children had blood taken from a finger or heel for testing, compared with 55% in rural areas (**Table 4.1**).
- The percentage of children who had blood taken for testing ranged from 42% in Busoga to 81% in Karamoja.
- The percentage of children under age 5 with recent fever who had blood taken from a finger or heel for testing ranged from 55% among those whose mothers had no education or only primary education, to 75% among those whose mothers had more than secondary education (**Table 4.1**).

4.3 Use of Recommended Antimalarials

Artemisinin-based combination therapy for children under age 5 with fever

Percentage of children under age 5 with a fever in the 2 weeks before the survey who took an ACT

Sample: Children under age 5 with a fever in the 2 weeks before the survey who took any antimalaria drug

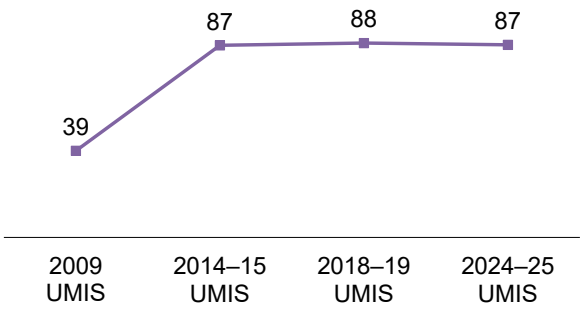
ACTs are the recommended first-line antimalarial drugs for the treatment of uncomplicated malaria in Uganda. Use has been recommended since 2004 and implemented since 2006 (National Malaria Control Programme 2018).

Eighty-seven percent of children under age 5 with recent fever who received an antimalarial took an ACT, 12% received an artesunate injection, and 3% received a quinine injection (**Table 4.4**).

Trends: The percentage of children with recent fever who took an ACT increased from 63% in the 2018–19 UMIS to 87% in the 2024–25 UMIS (**Figure 4.1**).

Figure 4.1 **Trends in use of artemisinin-based combination therapy**

Among children under age 5 with recent fever who took an antimalarial, percentage who received an artemisinin-based combination therapy



Patterns by background characteristics

- The percentage of children who took an ACT was lowest among children under age 6 months (77%) and highest among children age 36–47 months (91%).
- The percentage of children who took an ACT was highest in Busoga (95%) and lowest in South Buganda (67%).

4.4 Prevalence of Malaria in Children

Malaria prevalence in children

Percentage of children age 6–59 months classified as infected with malaria according to microscopy results

Sample: Children age 6–59 months

Malaria is endemic in Uganda. Malaria transmission is high throughout the year in most parts of the country, contributing to development of partial immunity within the first 2 years of life. However, many people, including children, can have malaria parasites in their blood without showing any signs of infection. Such asymptomatic infections not only contribute to further transmission of malaria but also increase the risk of anaemia and other associated morbidities among infected individuals.

In the 2024–25 UMIS, three test methods were used for all cases:

RDTs: The test used in the survey detects histidine-rich protein 2 (HRP2), a parasite protein antigen that is present in individuals infected with *P. falciparum*. It is always present during an active infection but can still be detected up to about 6 weeks after treatment, even when parasite clearance has been achieved (residual antigens). This explains why it is possible to see HRP2 RDT-positive results in individuals without active parasitaemia, and why this method has a higher malaria positivity rate than microscopy or real-time PCR.

Blood smear microscopy: This method detects the presence of actual malaria parasites in infected individuals. Due to its detection limits, it may miss infections with extremely low parasite density, particularly submicroscopic ones, usually present in asymptomatic individuals. This explains why microscopy is usually less sensitive than RDTs or real-time PCR.

Real-time PCR: This is a molecular-based method that detects the presence of parasite DNA in blood samples from infected individuals. Due to its precision and accuracy, it is more sensitive than traditional diagnostic methods such as microscopy or RDTs, especially in detecting low levels of parasitaemia. Real-time PCR is particularly useful for species identification.

In the 2024–25 UMIS, 96% of eligible children were tested using RDTs, 96% using microscopy, and 96% with real-time PCR (**Table 4.5**).

Twenty-one percent of children age 6–59 months were positive for malaria parasites according to RDTs, 13% according to microscopy, and 17% according to real-time PCR (**Table 4.6**).

Trends: National malaria prevalence according to microscopy in children under age 6–59 months increased from 10% in the 2018–19 UMIS to 13% in the 2024–25 UMIS (**Figure 4.2**).

Patterns by background characteristics

- Among children age 6–59 months, malaria prevalence according to microscopy increased with age, from 6% in children age 6–8 months to 16% in children age 48–59 months (**Figure 4.3**).
- Malaria prevalence according to microscopy among children age 6–59 months was more than twice as high in rural areas (16%) than in urban areas (7%) (**Table 4.6**).
- Lango (32%) and Karamoja (26%) had the highest malaria prevalences according to microscopy among children age 6–59 months, while Kampala (less than 1%) and Kigezi (1%) had the lowest (**Map 4.2**).
- Among children age 6–59 months, malaria prevalence according to microscopy decreased with mother's education, from 17% among children whose mothers had no formal education to 1% among those whose mothers had more than a secondary education.

Figure 4.2 **Trends in malaria prevalence among children**

Percentage of children age 6–59 months who tested positive for malaria by microscopy

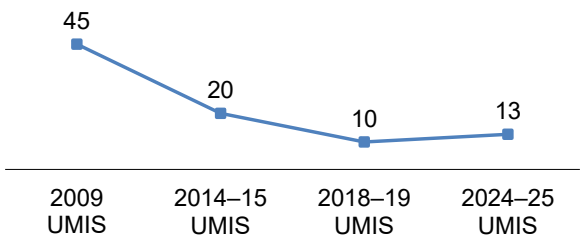
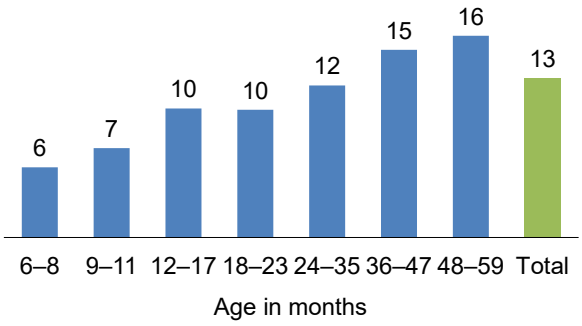


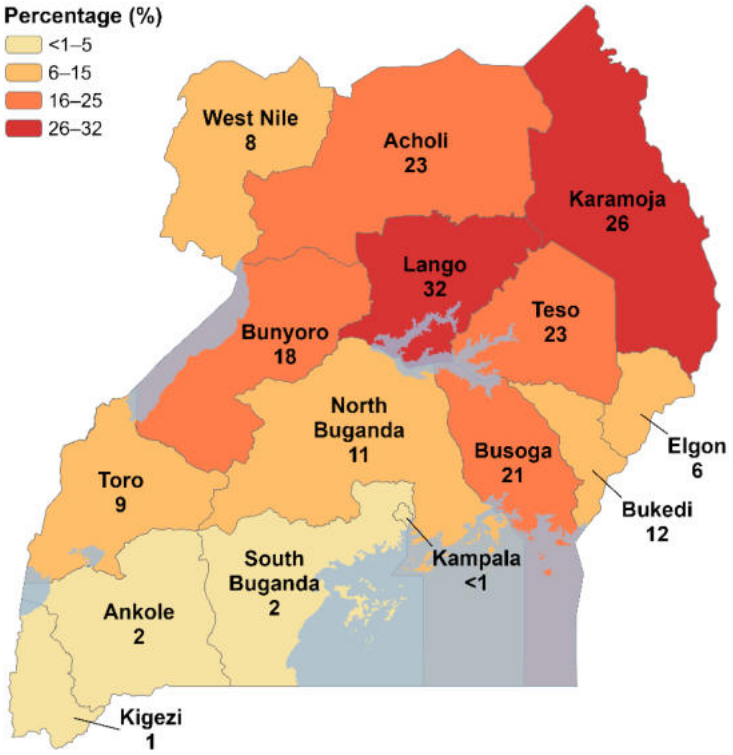
Figure 4.3 **Prevalence of malaria in children by age according to microscopy**

Percentage of children age 6–59 months who tested positive for malaria by microscopy



Map 4.2 **Prevalence of malaria in children by subregion**

Percentage of children age 6–59 months who tested positive for malaria by microscopy



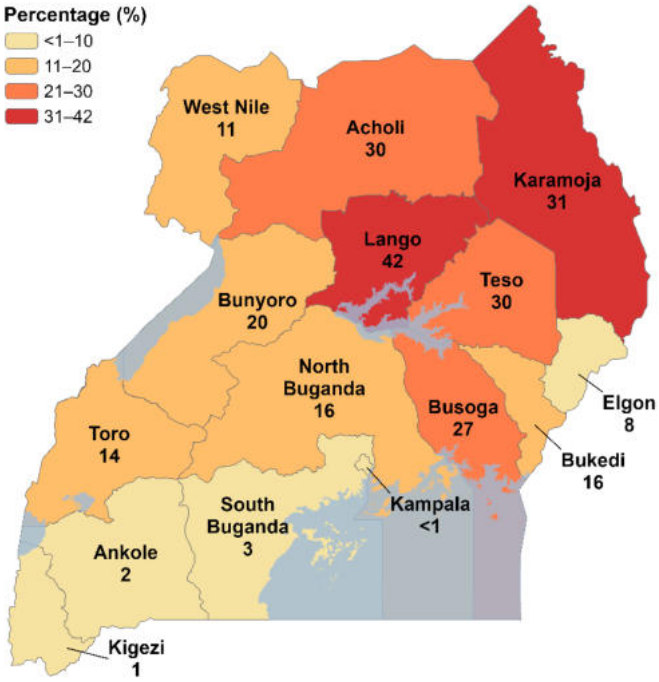
- Despite their classification as a special intervention area, seasonal malaria chemoprevention districts had a much higher prevalence of malaria (26%) than the national estimate (13%).

- Real-time PCR was used to identify malaria species among positive cases. Most infections were *P. falciparum* (85%), though *P. malariae* (4%), *P. ovale* (2%), and *P. vivax* (less than 1%) made up a small proportion of infections; mixed infections (10%) were also observed (**Table 4.7**).

Prevalences by both subregion and parasite (*P. falciparum* versus other species) are shown in **Map 4.3** and **Map 4.4**. Note that mixed infections are shown in both maps.

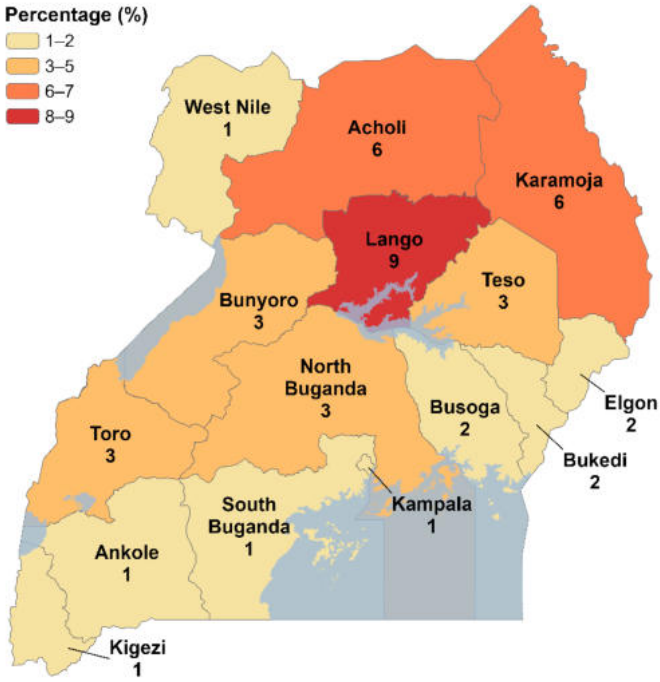
Map 4.3 **Prevalence of *P. falciparum* by subregion according to real-time PCR**

Percentage of children age 6–59 months who tested positive for P. falciparum *by real-time PCR*



Map 4.4 **Prevalence of non-*falciparum* *Plasmodium* species by subregion according to real-time PCR**

Percentage of children age 6–59 months who tested positive for other species and mixed infections by real-time PCR



Patterns by background characteristics

- Among children positive for malaria by real-time PCR, *P. falciparum* prevalence was highest in Busoga (93%), followed by Teso (91%) and West Nile (91%). Other species were most commonly observed in Lango, Acholi, and Karamoja (**Table 4.7**).

- Lango recorded the highest rate of mixed infections (18%).

4.5 Performance of Malaria Diagnostics

One of the advantages of real-time PCR is that it can detect infections that are often missed by microscopy. Among children who tested negative for malaria by microscopy, 7% tested positive by real-time PCR. Submicroscopic infections were most common in Lango (18%) and Acholi (13%) (**Table 4.8**).

List of Tables

For detailed information on malaria, see the following tables:

- **Table 4.1 Children with fever and care seeking, prompt treatment, and diagnosis**
- **Table 4.2 Source of advice or treatment for children with fever**
- **Table 4.3 Reason for not seeking care for children with fever**
- **Table 4.4 Type of antimalarial drugs used**
- **Table 4.5 Coverage of testing for malaria in children**
- **Table 4.6 Prevalence of malaria in children**
- **Table 4.7 Detection of malaria infection by real-time PCR**
- **Table 4.8 Detection of submicroscopic malaria infection by real-time PCR**

Table 4.1 Children with fever and care seeking, prompt treatment, and diagnosis

Percentage of children under age 5 with fever in the 2 weeks preceding the survey; and among children under age 5 with fever, percentage for whom advice or treatment was sought, percentage for whom advice or treatment was sought the same or next day following the onset of fever, percentage who had blood taken from a finger or heel for testing, and percentage who were diagnosed with malaria by a healthcare provider, according to background characteristics, Uganda MIS 2024–25

	Children under age 5		Children under age 5 with fever				
Background characteristic	Percentage with fever in the 2 weeks preceding the survey	Number of children	Percentage for whom advice or treatment was sought[1]	Percentage for whom advice or treatment was sought the same or next day	Percentage who had blood taken from a finger or heel for testing	Percentage who were diagnosed with malaria by a healthcare provider	Number of children
Age in months							
<12	29.7	1,383	86.6	57.8	55.5	43.9	411
12–23	38.5	1,234	88.0	54.9	65.8	60.8	475
24–35	32.2	1,195	82.2	51.4	57.4	55.2	385
36–47	27.7	1,219	84.2	57.2	53.1	53.6	338
48–59	26.2	1,151	76.4	49.4	50.2	49.3	302
Sex							
Male	31.1	3,104	84.7	54.0	59.8	55.8	966
Female	30.7	3,078	83.3	54.8	54.5	50.0	945
Residence							
Urban	26.0	2,278	85.7	55.4	58.8	51.2	593
Rural	33.8	3,904	83.3	53.9	56.4	53.7	1,318
Subregion							
Kampala	16.7	145	87.3	72.7	58.2	47.3	24
Buganda	23.2	1,657	86.5	53.1	57.6	49.7	384
South Buganda	18.7	975	89.0	51.8	64.6	54.2	183
North Buganda	29.5	682	84.3	54.2	51.2	45.7	201
Busoga	40.1	550	93.9	56.6	41.8	48.0	221
Bukedi	43.3	404	83.8	49.6	50.5	42.1	175
Elgon	29.2	273	89.2	51.4	54.0	47.5	79
Teso	56.0	373	81.0	45.4	57.4	53.9	209
Lango	62.6	333	81.6	61.9	65.9	63.6	209
Acholi	47.1	252	74.5	60.7	69.3	64.8	119
Karamoja	38.0	263	92.1	83.7	81.3	69.1	100
West Nile	30.6	420	75.4	50.7	54.3	45.4	129
Bunyoro	30.1	476	78.4	41.6	50.7	56.4	144
Toro	14.3	420	83.3	60.1	66.8	66.8	60
Ankole	10.0	377	(86.8)	(47.4)	(60.4)	(39.1)	38
Kigezi	8.8	239	(70.9)	(31.1)	(33.0)	(29.6)	21
Mother's education							
No education	35.4	659	83.3	58.2	55.4	53.1	233
Primary	35.1	3,444	82.7	53.1	55.0	52.3	1,208
Secondary	23.9	1,660	86.7	55.0	61.7	53.4	397
More than secondary	17.3	419	93.3	60.4	75.1	60.2	73
Special areas							
IRS districts[2]	41.7	727	82.1	48.3	51.7	45.2	303
SMC districts[3]	38.0	263	92.1	83.7	81.3	69.1	100
High altitude districts[4]	18.2	474	85.7	49.4	47.5	42.7	86
Wealth quintile							
Lowest	44.5	1,508	79.1	54.4	56.7	54.2	671
Second	32.6	1,223	84.0	49.4	53.8	50.0	399
Middle	28.3	1,120	85.6	54.3	57.7	54.5	317
Fourth	24.5	1,198	85.9	55.9	54.5	47.5	293
Highest	20.4	1,134	93.6	61.1	67.1	59.1	231
Total	30.9	6,182	84.0	54.4	57.2	52.9	1,911

Note: Figures in parentheses are based on 25–49 unweighted cases.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] Includes advice or treatment from the following sources: public sector, private medical sector, shop, market, and hawker/itinerant drug seller. Excludes advice or treatment from a traditional practitioner.
[2] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[3] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[4] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 4.2 Source of advice or treatment for children with fever

Percentage of children under age 5 with fever in the 2 weeks preceding the survey for whom advice or treatment was sought from specific sources; and among children under age 5 with fever in the 2 weeks preceding the survey for whom advice or treatment was sought, percentage for whom advice or treatment was sought from specific sources, Uganda MIS 2024–25

	Percentage for whom advice or treatment was sought from each source:	
Source	Among children with fever	Among children with fever for whom advice or treatment was sought
Public sector	**35.4**	**41.8**
Government hospital	6.7	7.9
Government health centre	22.9	27.1
Mobile clinic/outreach	1.9	2.2
village health worker/team or community health worker	4.8	5.6
Other	0.1	0.2
Private medical sector (non-NGO)	**51.0**	**60.2**
Private hospital/clinic	38.3	45.2
Pharmacy	12.6	14.8
Private doctor	0.2	0.2
Mobile clinic	0.4	0.5
Other private medical sector	0.0	0.1
Other private sector	**0.9**	**1.0**
Shop	0.5	0.6
Traditional practitioner	0.3	0.4
Hawker/itinerant drug seller	0.1	0.1
Other	0.7	0.8
Number of children	1,911	1,620

Note: Advice or treatment for children with fever may have been sought from more than one source.
NGO = nongovernmental organisation

Table 4.3 Reason for not seeking care for children with fever

Among children under age 5 with fever in the 2 weeks preceding the survey for whom advice and treatment was not sought, the percentage by reasons for which advice or treatment was not sought, according to residence, Uganda MIS 2024–25

Reason for not seeking advice or treatment[1]	Residence		
	Urban	Rural	Total
Child just fell ill	9.4	12.0	11.3
Child not very ill	19.8	22.6	21.8
Clinic too far	5.3	7.1	6.6
Have no money	30.9	33.3	32.6
Waiting for child's father	1.2	2.9	2.4
Don't know what to do	8.0	2.4	3.9
Already had medicine at home	23.2	22.5	22.7
Other	14.2	14.6	14.5
Number of children	79	212	291

[1] Respondents may have mentioned more than one reason.

Table 4.4 Type of antimalarial drugs used

Among children under age 5 with fever in the 2 weeks preceding the survey who took any antimalarial medication, percentage who took specific antimalarial drugs, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage of children who took:									Number of children with fever who took anti-malarial drug
	Any ACT	SP/ Fansidar	Chloroquine	Amodia-quine	Quinine pills	Quinine injection	Artesunate rectal	Artesunate injection	Other anti-malarial	
Age in months										
<6	76.8	1.2	3.9	3.0	1.4	0.0	2.1	17.7	1.3	60
6–11	86.4	1.9	0.7	0.7	0.0	1.2	2.6	17.4	1.2	145
12–23	84.0	1.3	0.0	0.9	1.1	4.2	1.2	13.8	1.8	335
24–35	88.6	0.6	0.0	0.0	1.0	2.1	1.7	9.7	3.7	267
36–47	90.7	1.4	1.0	0.6	0.2	4.4	1.7	9.5	3.5	241
48–59	88.4	3.4	1.9	0.8	0.9	3.4	0.0	9.0	1.2	208
Sex										
Male	86.3	1.4	1.0	0.8	0.6	2.9	1.3	12.9	2.4	659
Female	87.5	1.9	0.6	0.6	0.9	3.3	1.5	10.8	2.2	596
Residence										
Urban	83.5	1.7	0.0	1.1	1.1	2.8	1.1	16.7	2.3	375
Rural	88.4	1.6	1.1	0.5	0.6	3.3	1.5	9.9	2.4	880
Subregion										
Kampala	*	*	*	*	*	*	*	*	*	9
Buganda	74.4	5.4	3.3	0.0	3.2	6.2	1.8	21.8	2.3	233
South Buganda	66.6	11.5	5.7	0.0	3.8	7.9	2.1	30.0	3.6	110
North Buganda	81.3	0.0	1.2	0.0	2.6	4.7	1.4	14.5	1.1	123
Busoga	94.8	0.0	0.0	1.7	0.0	1.5	1.0	6.5	0.0	135
Bukedi	91.5	1.6	0.8	0.0	0.0	1.5	0.0	3.9	2.3	106
Elgon	92.8	0.0	0.0	0.0	0.0	3.5	0.0	7.4	1.2	55
Teso	87.1	0.6	0.0	0.0	1.2	1.5	0.0	12.4	2.3	143
Lango	91.9	0.5	0.0	1.0	0.0	4.3	3.1	11.1	2.1	169
Acholi	92.2	1.6	0.0	0.7	0.0	0.0	0.6	8.1	0.8	89
Karamoja	67.6	0.9	0.0	0.0	0.9	3.7	1.8	15.7	17.6	53
West Nile	90.0	0.0	0.0	1.3	0.0	0.0	6.4	3.6	0.0	73
Bunyoro	91.4	0.8	0.8	2.3	0.0	3.9	0.0	13.3	0.8	125
Toro	(89.1)	(0.0)	(0.0)	(0.0)	(0.0)	(4.2)	(0.0)	(12.9)	(6.4)	50
Ankole	*	*	*	*	*	*	*	*	*	12
Kigezi	*	*	*	*	*	*	*	*	*	4
Mother's education										
No education	85.9	0.8	1.6	0.7	0.3	3.5	0.7	9.7	5.7	146
Primary	89.1	0.7	0.2	0.7	0.6	2.5	1.4	10.6	1.6	825
Secondary	81.4	3.7	2.2	0.6	1.7	4.9	2.1	16.2	2.3	240
More than secondary	(78.2)	(9.5)	(0.0)	(1.4)	(0.0)	(5.0)	(0.0)	(19.8)	(6.0)	44
Special areas										
IRS districts[1]	89.2	1.4	0.5	2.1	0.0	1.1	2.5	5.2	2.1	183
SMC districts[2]	67.6	0.9	0.0	0.0	0.9	3.7	1.8	15.7	17.6	53
High altitude districts[3]	93.0	0.0	0.0	0.0	0.0	4.3	0.0	10.0	1.4	48
Wealth quintile										
88.5	0.6	0.0	1.3	0.5	2.9	0.9	10.1	2.6	453	88.5
91.0	1.5	0.0	0.4	1.5	1.9	2.3	8.2	0.9	265	91.0
88.8	0.8	0.9	0.5	0.9	3.4	1.4	7.6	3.0	226	88.8
80.6	0.0	3.2	0.0	0.0	4.9	1.8	18.0	3.2	174	80.6
78.7	8.4	1.4	0.8	1.0	3.6	1.0	24.5	2.1	138	78.7
Total	86.9	1.6	0.8	0.7	0.8	3.1	1.4	11.9	2.3	1,256

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
ACT = artemisinin-based combination therapy; IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention; SP = sulphadoxine-pyrimethamine
[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 4.5 Coverage of testing for malaria in children

Percentage of eligible children age 6–59 months who were tested for malaria, according to background characteristics (unweighted), Uganda MIS 2024–25

Background characteristic	Percentage tested for malaria by: RDT	Microscopy	Real-time PCR	Number of children
Age in months				
6–8	94.5	94.2	93.9	363
9–11	94.4	94.4	94.2	359
12–17	96.8	96.8	96.6	744
18–23	94.7	95.2	95.2	662
24–35	95.4	95.6	95.6	1,512
36–47	96.2	96.2	96.1	1,567
48–59	95.2	95.4	95.2	1,595
Mother's interview status				
Interviewed	95.9	95.9	95.8	5,166
Not interviewed[1]	94.3	94.8	94.6	1,636
Residence				
Urban	93.1	93.4	93.2	2,532
Rural	96.9	97.0	96.9	4,270
Subregion				
Kampala	80.4	81.1	81.1	291
Buganda	93.3	93.2	92.8	892
South Buganda	92.3	92.1	91.8	441
North Buganda	94.2	94.2	93.8	451
Busoga	94.8	95.4	95.4	498
Bukedi	98.7	98.7	98.7	525
Elgon	98.3	98.6	98.3	484
Teso	96.7	96.7	96.3	492
Lango	98.9	99.3	99.1	435
Acholi	96.4	96.4	96.2	416
Karamoja	94.5	94.4	94.5	568
West Nile	94.0	94.0	93.6	486
Bunyoro	95.9	96.3	96.3	561
Toro	98.2	98.2	98.2	439
Ankole	97.2	97.5	97.5	357
Kigezi	96.9	97.2	97.2	358
Mother's education[2]				
No education	96.1	96.2	96.2	709
Primary	97.0	97.1	96.9	2,901
Secondary	94.7	94.6	94.6	1,240
More than secondary	90.2	89.9	89.6	316
Special areas				
IRS districts[3]	96.4	96.4	96.3	894
SMC districts[4]	94.5	94.4	94.5	568
High altitude districts[5]	97.9	98.2	98.0	768
Wealth quintile				
Lowest	97.0	96.9	96.9	1,956
Second	97.8	98.0	97.9	1,435
Middle	96.3	96.6	96.3	1,252
Fourth	94.5	94.9	94.8	1,105
Highest	89.8	89.7	89.5	1,054
Total	95.5	95.6	95.5	6,802

IRS = indoor residual spraying; RDT = rapid diagnostic test (Bioline™ Malaria Ag P.f); SMC = seasonal malaria chemoprevention

[1] Includes children whose mothers are deceased

[2] For women who are not interviewed, information on education is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 4.6 Prevalence of malaria in children

Percentage of children age 6–59 months classified by two tests as having malaria, according to background characteristics, Uganda MIS 2024–25

	Malaria prevalence according to RDT		Malaria prevalence according to microscopy		Malaria prevalence according to real-time PCR	
Background characteristic	RDT positive	Number of children	Microscopy positive	Number of children	PCR positive	Number of children
Age in months						
6–8	10.3	325	5.5	323	8.3	322
9–11	10.9	334	7.0	334	9.0	332
12–17	18.8	703	10.1	703	15.3	702
18–23	20.7	614	10.0	617	15.4	617
24–35	22.1	1,408	11.9	1,411	17.5	1,410
36–47	22.4	1,467	14.7	1,467	19.6	1,464
48–59	24.9	1,451	15.8	1,454	21.0	1,451
Mother's interview status						
Interviewed	20.2	4,721	11.6	4,721	16.7	4,715
Not interviewed[1]	23.8	1,580	15.1	1,587	19.7	1,584
Residence						
Urban	12.5	2,261	6.7	2,263	8.8	2,258
Rural	25.9	4,041	15.7	4,046	22.3	4,040
Subregion						
Kampala	0.9	98	0.4	98	1.3	98
Buganda	10.7	1,593	6.2	1,591	9.5	1,585
South Buganda	3.9	909	2.3	907	3.6	905
North Buganda	19.9	684	11.4	684	17.4	681
Busoga	29.5	569	20.9	573	28.4	573
Bukedi	16.2	434	11.9	434	17.0	434
Elgon	12.8	318	6.1	318	8.5	318
Teso	44.1	368	22.9	368	31.0	367
Lango	59.6	366	31.6	368	43.7	367
Acholi	46.5	268	23.3	268	31.7	268
Karamoja	39.9	258	26.3	258	31.8	258
West Nile	16.6	416	8.0	416	11.7	414
Bunyoro	26.3	479	17.6	481	21.2	481
Toro	13.9	463	9.2	463	15.7	463
Ankole	2.0	434	1.5	435	3.2	435
Kigezi	0.9	237	0.6	238	2.1	238
Mother's education[2]						
No education	27.9	509	16.9	510	21.6	510
Primary	25.1	2,699	13.8	2,702	20.4	2,697
Secondary	10.0	1,224	7.0	1,222	9.3	1,222
More than secondary	3.9	290	1.4	288	4.1	287
Special areas						
IRS districts[3]	20.5	783	11.6	783	16.7	782
SMC districts[4]	39.9	258	26.3	258	31.8	258
High altitude districts[5]	7.3	513	3.7	514	5.7	514
Wealth quintile						
Lowest	38.8	1,496	23.1	1,496	31.1	1,495
Second	24.2	1,347	16.4	1,352	22.0	1,350
Middle	17.9	1,255	10.4	1,257	15.1	1,254
Fourth	14.0	1,184	6.0	1,188	10.1	1,186
Highest	3.2	1,019	1.9	1,016	2.8	1,014
Total	21.1	6,301	12.5	6,309	17.4	6,298

Note: The RDT used in this survey detects only *P. falciparum* parasites, while microscopy and real-time PCR can detect any *Plasmodium* species.
IRS = indoor residual spraying; RDT = rapid diagnostic test (Bioline™ Malaria Ag P.f); SMC = seasonal malaria chemoprevention
[1] Includes children whose mothers are deceased
[2] For women who are not interviewed, information on education is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.
[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 4.7 Detection of malaria infection by real-time PCR

Percent distribution of children age 6–59 months testing positive for malaria by real-time PCR by type of *Plasmodium* species, according to subregion and special areas, Uganda MIS 2024–25

Background characteristic	Positive for *P. falciparum*	Positive for *P. malariae*	Positive for *P. vivax*	Positive for *P. ovale*	Positive for mixed infection	Total	Number of children
Subregion							
Kampala	*	*	*	*	*	100.0	1
Buganda	82.4	4.9	0.0	6.2	6.5	100.0	151
South Buganda	*	*	*	*	*	100.0	33
North Buganda	83.4	4.2	0.0	4.0	8.3	100.0	118
Busoga	93.0	3.9	0.0	0.7	2.3	100.0	162
Bukedi	88.5	2.3	0.0	1.2	8.0	100.0	74
Elgon	(81.0)	(0.0)	(2.5)	(2.5)	(13.9)	100.0	27
Teso	91.1	2.0	0.0	0.0	6.9	100.0	114
Lango	78.7	2.1	1.0	0.0	18.3	100.0	160
Acholi	80.8	4.1	0.6	1.7	12.8	100.0	85
Karamoja	82.3	1.8	0.0	1.2	14.7	100.0	82
West Nile	90.9	0.0	0.0	2.0	7.1	100.0	48
Bunyoro	86.1	4.4	0.0	1.0	8.6	100.0	102
Toro	78.8	10.1	0.0	1.6	9.6	100.0	73
Ankole	*	*	*	*	*	100.0	14
Kigezi	*	*	*	*	*	100.0	5
Special areas							
IRS districts[1]	89.9	1.6	0.7	1.4	6.4	100.0	130
SMC districts[2]	82.3	1.8	0.0	1.2	14.7	100.0	82
High altitude districts[3]	(77.0)	(7.4)	(2.3)	(2.3)	(10.9)	100.0	29
Wealth quintile							
Lowest	84.2	2.7	0.2	0.7	12.2	100.0	465
Second	86.6	3.9	0.2	1.9	7.3	100.0	296
Middle	85.2	4.4	0.0	2.3	8.1	100.0	189
Fourth	82.0	6.2	0.6	3.2	8.0	100.0	119
Highest	(78.8)	(11.3)	(1.9)	(5.8)	(2.1)	100.0	28
Total	84.6	3.9	0.3	1.7	9.5	100.0	1,098

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 4.8 Detection of submicroscopic malaria infection by real-time PCR

Among children age 6–59 months who tested negative for malaria by microscopy, percent distribution by real-time PCR result for any malaria species; and among children age 6–59 months who tested negative for malaria by microscopy but positive by real-time PCR, percent distribution of positive results for each *Plasmodium* species, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Real-time PCR result				Number of children negative for malaria by micro-scopy	Among children age 6–59 months who tested negative for malaria by microscopy but positive by real-time PCR						Number of children negative for malaria by micro-scopy but positive by real-time PCR
	Negative	Positive	Other	Total		Positive for *P. falciparum*	Positive for *P. ovale*	Positive for *P. malariae*	Positive for *P. vivax*	Positive for mixed infection	Total	
Age in months												
6–8	95.9	3.8	0.2	100.0	305	*	*	*	*	*	100.0	12
9–11	96.9	2.6	0.5	100.0	309	*	*	*	*	*	100.0	8
12–17	92.7	7.2	0.1	100.0	632	(86.8)	(8.2)	(0.0)	(0.0)	(5.1)	100.0	45
18–23	93.2	6.8	0.0	100.0	554	(81.3)	(8.9)	(3.6)	(4.1)	(2.1)	100.0	38
24–35	93.2	6.8	0.1	100.0	1,240	86.0	7.6	0.0	1.2	5.3	100.0	84
36–47	93.2	6.5	0.2	100.0	1,250	91.5	3.9	1.8	0.0	2.8	100.0	82
48–59	92.5	7.3	0.2	100.0	1,221	92.3	2.4	0.0	1.3	4.1	100.0	89
Mother's interview status												
Interviewed	93.3	6.6	0.1	100.0	4,172	87.2	7.2	0.8	1.1	3.8	100.0	275
Not interviewed[1]	93.5	6.2	0.3	100.0	1,340	87.5	3.3	0.8	0.8	7.6	100.0	83
Fever in the 2 weeks preceding the survey												
Yes	89.5	10.2	0.3	100.0	1,333	90.8	4.6	1.6	0.6	2.4	100.0	136
No	95.0	4.9	0.1	100.0	2,833	83.7	9.7	0.0	1.5	5.1	100.0	139
Child's mother not interviewed	93.5	6.2	0.3	100.0	1,341	87.5	3.3	0.8	0.8	7.6	100.0	83
Treated with an antimalarial in the 2 weeks preceding the survey												
Yes	87.2	12.4	0.4	100.0	894	92.7	2.2	1.4	0.8	2.9	100.0	111
No	94.9	5.0	0.1	100.0	3,277	83.4	10.6	0.3	1.3	4.3	100.0	164
Child's mother not interviewed	93.5	6.2	0.3	100.0	1,341	87.5	3.3	0.8	0.8	7.6	100.0	83
Residence												
Urban	96.6	3.2	0.2	100.0	2,107	87.6	4.7	1.8	0.0	5.9	100.0	66
Rural	91.3	8.6	0.1	100.0	3,405	87.2	6.6	0.5	1.3	4.4	100.0	291
Subregion												
Kampala	98.7	1.3	0.0	100.0	97	*	*	*	*	*	100.0	1
Buganda	95.8	3.8	0.4	100.0	1,492	(87.0)	(7.1)	(0.0)	(0.0)	(5.9)	100.0	57
South Buganda	98.4	1.3	0.2	100.0	886	*	*	*	*	*	100.0	12
North Buganda	92.0	7.5	0.6	100.0	606	(89.0)	(3.6)	(0.0)	(0.0)	(7.4)	100.0	45
Busoga	90.1	9.9	0.0	100.0	450	(88.5)	(11.5)	(0.0)	(0.0)	(0.0)	100.0	44
Bukedi	92.6	7.4	0.0	100.0	382	(87.7)	(3.1)	(0.0)	(3.1)	(6.1)	100.0	28
Elgon	96.8	3.2	0.0	100.0	299	*	*	*	*	*	100.0	10
Teso	88.8	10.6	0.6	100.0	284	(92.1)	(2.6)	(0.0)	(0.0)	(5.3)	100.0	30
Lango	81.3	18.4	0.4	100.0	250	91.1	1.5	3.4	0.0	4.0	100.0	46
Acholi	87.2	12.5	0.3	100.0	206	(85.4)	(0.0)	(2.1)	(0.0)	(12.5)	100.0	26
Karamoja	92.4	7.6	0.0	100.0	190	(93.3)	(0.0)	(0.0)	(0.0)	(6.7)	100.0	14
West Nile	95.4	4.4	0.2	100.0	382	*	*	*	*	*	100.0	17
Bunyoro	90.4	9.6	0.0	100.0	395	(92.3)	(5.1)	(0.0)	(2.6)	(0.0)	100.0	38
Toro	91.6	8.4	0.0	100.0	420	(77.2)	(9.8)	(0.0)	(3.3)	(9.8)	100.0	35
Ankole	98.3	1.7	0.0	100.0	428	*	*	*	*	*	100.0	7
Kigezi	98.5	1.5	0.0	100.0	236	*	*	*	*	*	100.0	4
Mother's education[2]												
No education	93.8	6.2	0.0	100.0	424	(81.6)	(9.7)	(0.0)	(4.4)	(4.3)	100.0	26
Primary	91.1	8.7	0.2	100.0	2,328	89.9	5.5	0.8	0.5	3.3	100.0	203
Secondary	96.7	3.3	0.0	100.0	1,136	(86.5)	(4.7)	(0.0)	(2.3)	(6.5)	100.0	37
More than secondary	96.4	3.0	0.6	100.0	284	*	*	*	*	*	100.0	9
Special areas												
IRS districts[3]	93.3	6.7	0.0	100.0	692	89.7	4.6	2.0	1.9	1.9	100.0	46
SMC districts[4]	92.4	7.6	0.0	100.0	190	(93.3)	(0.0)	(0.0)	(0.0)	(6.7)	100.0	14
High altitude districts[5]	97.7	2.3	0.0	100.0	495	*	*	*	*	*	100.0	11
Wealth quintile												
Lowest	88.6	11.3	0.1	100.0	1,204	89.3	5.0	1.2	0.0	4.5	100.0	136
Second	91.5	8.5	0.0	100.0	857	87.4	4.7	0.0	3.7	4.1	100.0	72
Middle	93.5	6.4	0.1	100.0	1,188	88.7	5.8	0.0	1.3	4.2	100.0	76
Fourth	95.0	4.8	0.1	100.0	1,182	88.4	6.0	1.2	0.0	4.5	100.0	57
Highest	98.1	1.5	0.4	100.0	1,080	*	*	*	*	*	100.0	16
Total	93.3	6.5	0.2	100.0	5,512	87.3	6.3	0.8	1.0	4.6	100.0	358

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention
[1] Includes children whose mothers are deceased
[2] For women who are not interviewed, information on education is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.
[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba
[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa
[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

MALARIA KNOWLEDGE, ATTITUDES, AND BEHAVIOURS

5

Key Findings

- ***Exposure to malaria messages:*** Almost half (48%) of women had heard or seen a malaria message in the 6 months preceding the survey. More than half (56%) cited radio as the source of information.
- ***Knowledge of ways to avoid malaria:*** 93% of women knew there are ways to avoid getting malaria.
- ***Opinions and beliefs about malaria:*** 87% of women perceived that their families and communities were at risk of malaria.
- ***Attitudes towards malaria-related behaviours:*** 75% of women had a positive attitude towards specific malaria behaviours.

This chapter assesses the extent to which malaria information and communication messaging reach women age 15–49 and the channels through which women receive such messages. It also provides data on women's basic knowledge about treatment and prevention of malaria, perceptions of susceptibility to malaria and its severity, attitudes towards and confidence in changing malaria-related behaviours, and perceptions towards community norms (that is, self-efficacy).

These described indictors guide the uptake of social and behaviour change communication (SBCC) interventions for malaria programming (Roll Back Malaria Partnership 2017). Uganda's National Malaria SBCC Plan 2021–2025 (Ministry of Health 2021) emphasises increasing knowledge as a way to motivate and improve adherence to malaria prevention and control measures. This in turn provides a supportive environment that enables the community to develop and sustain positive and desirable behavioural outcomes.

5.1 Exposure to Malaria Messages

Exposure to communication messages

Percentage of women age 15–49 who recalled seeing or hearing a message about malaria through various sources in the past 6 months

Sample: Women age 15–49

A crucial element in the effort to eliminate malaria is the ability to reach the population with information and educational materials on malaria, its causes, and ways to avoid getting it. Exposure to information is the critical first step to increasing knowledge of the products, practices, and services that may influence an individual to adopt or change a behaviour. The target population's ability to recall messages about malaria is an indicator of how widely communication activities have penetrated the target audience.

To assess coverage of malaria communication programs, women age 15–49 were asked if they had seen or heard any messages about malaria prevention in the 6 months preceding the survey. Women who had heard or seen messages were further asked about the sources of the messages.

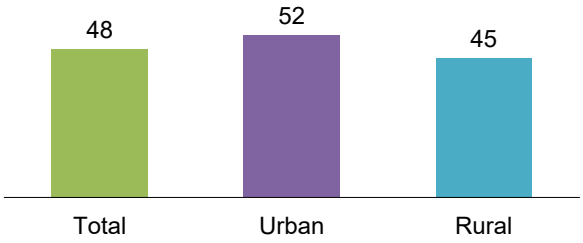
Overall, 48% of women had heard or seen a malaria message in the 6 months preceding the survey. The majority (56%) heard a message on the radio, 28% saw a message on television, 18% heard a message from a community health worker, 14% heard a message through a healthcare provider, 5% saw a message on social media platforms, and 6% saw or heard a message elsewhere (**Table 5.1**).

Patterns by background characteristics

- Exposure to malaria messages in the past 6 months was higher in urban areas (52%) than in rural areas (45%) (**Figure 5.1**).
- Exposure to malaria messages increased with level of education, from 38% among women with no education to 64% among women with more than secondary education.
- Exposure to malaria messages was highest (57%) in South Buganda and lowest (31%) in West Nile (**Map 5.1**).
- Television was reported as the main source of malaria messaging by women in the highest wealth quintile (65%), while radio was reported as the main source of malaria messaging by women in the four lower quintiles (ranging from 47% to 65%).

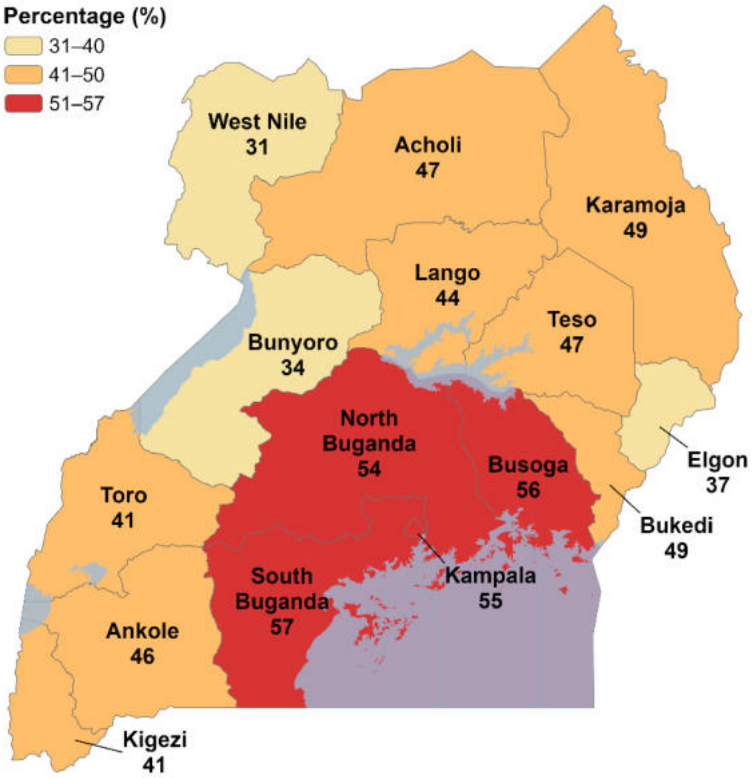
Figure 5.1 **Reach of social and behaviour change communication messages by residence**

Percentage of women age 15–49 who saw or heard a message on malaria in the past 6 months



Map 5.1 **Reach of social and behaviour change communication messages by subregion**

Percentage of women age 15–49 who saw or heard a message on malaria in the past 6 months



5.2 Knowledge of Ways to Avoid Malaria

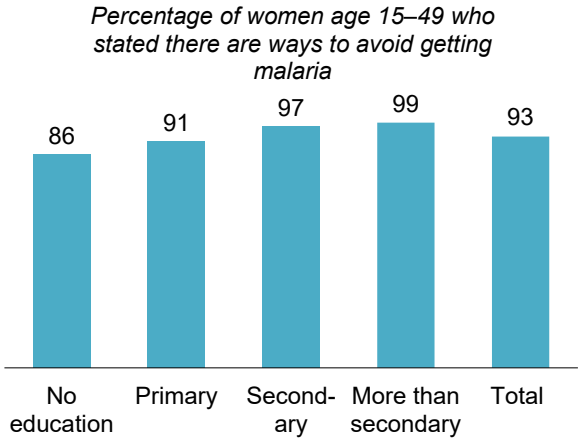
Knowledge helps to explain why certain behaviours may not be adopted and can guide design and implementation of SBCC activities. Better knowledge of ways to prevent malaria, such as increasing the use of insecticide-treated nets (ITNs), is a foundational step towards changing behaviour. Women age 15–49 were asked if there are ways to avoid getting malaria. Women who said that there are ways to avoid getting malaria were further asked to report specific ways. Almost all women (93%) stated there are ways to avoid getting malaria. Among those who said there are ways to avoid it, 97% cited sleeping under a mosquito net or ITN. Other commonly cited measures included keeping surroundings clean (40%) and filling in stagnant waters (29%) (**Table 5.2**).

Trends: The percentage of women who said there are ways to avoid getting malaria remained stable between the 2018–19 Uganda Malaria Indicator Survey (UMIS) (94%) and the 2024–25 UMIS (93%).

Patterns by background characteristics

- The proportion of women with knowledge of ways to avoid getting malaria increased with education, ranging from 86% among women with no education to 99% among those with more than secondary education (**Figure 5.2**).
- The percentage of women who stated there are ways to avoid getting malaria ranged from 85% in Toro to 98% in South Buganda.

Figure 5.2 **Knowledge that there are ways to avoid malaria by education**



5.3 Perceived Susceptibility, Severity, and Self-efficacy

Perceived risk involves the likelihood of a specific event occurring (perceived susceptibility) multiplied by the magnitude of consequences associated with that event (perceived severity) (Douglas 1986). Self-efficacy refers to people's confidence in their ability to perform a specific behaviour, which may affect whether they choose to embrace or avoid that behaviour.

During the survey, a series of statements were read to capture respondents' perceptions of malaria susceptibility, their beliefs regarding the severity of the consequences of malaria, and their perceived self-efficacy to perform specific malaria-related behaviours.

Overall, 87% of women perceived that their families and communities were at risk for malaria. Relatedly, 71% of women believed that the consequences of malaria are serious. Forty-three percent of women disagreed with the statement that getting malaria is not a problem because it can be easily treated, and 65% disagreed with the statement that only weak children can die from malaria (**Table 5.3**).

Eighty-six percent of women said that they were confident in their ability to perform specific malaria-related behaviours. This included women who agreed that they can sleep under a mosquito net for the entire night when there are lots of mosquitoes (83%) and those who agreed that they can sleep under a mosquito net for the entire night when there are few mosquitoes (79%) (**Table 5.3**).

Patterns by background characteristics

- Perceived susceptibility was higher (89%) among women living with children under age 5 than among those with no children under age 5 (86%).
- Although 86% of women age 15–49 in all subregions were confident in their ability to perform specific malaria-related behaviours, only 67% in Toro expressed this confidence.
- Perceived community and family risk from malaria decreased with increasing household wealth, from 90% among women in the lowest wealth quintile to 85% among those in the highest wealth quintile. In contrast, the percentage of women who perceived the consequences of malaria as serious increased with wealth, rising from 65% in the lowest quintile to 77% in the highest.

5.4 Attitudes towards Malaria-related Behaviours and Perceptions of Community Norms

People who view a behaviour favourably are more likely to adopt the behaviour. Those with favourable attitudes towards a behaviour anticipate beneficial outcomes (for example, peace of mind from seeking

prompt care) or feel that the behaviour has positive attributes (for example, feeling safe from sleeping under an ITN).

Women were asked whether they do not like sleeping under a mosquito net when the weather is too warm and whether it is best to start giving a child with a fever any medicine they have at home. If they disagreed with either statement, they were considered to have a favourable attitude towards specific malaria-related behaviours. Overall, 75% of women had a favourable attitude towards specific malaria-related behaviours.

Beliefs about what others do and what others think we should do often guide our actions, and these types of beliefs are called norms. Malaria programmes can influence behaviours if they portray certain behaviours as socially desirable or socially unacceptable. Seventy-one percent of women believed that most people in their community currently practice specific malaria-related behaviours (**Table 5.4**). This included women who agreed that people in their community usually take their children to a healthcare provider on the same day or the day after they develop a fever (57%), and women who agreed that people in the community who have a mosquito net usually sleep under it every night (56%).

Patterns by background characteristics

- A larger proportion of rural (74%) than urban (67%) women believed that the majority of their community currently practices specific malaria-related behaviours.
- Lango had the highest percentage (94%) of women who believed that the majority of their community currently practices specific malaria-related behaviours, while Toro had the lowest (50%).

List of Tables

For detailed information on malaria beliefs and exposure to malaria messages, see the following tables:

- **Table 5.1 Media exposure to malaria messages**
- **Table 5.2 Knowledge of ways to avoid malaria**
- **Table 5.3 Malaria susceptibility, severity, and self-efficacy**
- **Table 5.4 Attitudes towards malaria-related behaviours and perceptions of community norms**

Table 5.1 Media exposure to malaria messages

Percentage of women age 15–49 who saw or heard a malaria message in the past 6 months; and among those who saw or heard a malaria message in the past 6 months, percentage who cited specific sources for malaria messages, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage who saw or heard a malaria message in the past 6 months	Number of women	Percentage who cited specific sources of exposure to malaria messages:										Number of women who saw or heard a message in past 6 months
			Radio	Television	Poster/ billboard	News-paper/ magazine	Leaflet/ brochure	Health-care provider	Commu-nity health worker	Social media	Other	Don't remember	
Age													
15–19	40.0	2,047	51.8	32.3	2.5	2.1	0.5	10.7	13.5	4.5	11.2	0.1	819
20–24	45.6	1,838	54.2	27.3	0.6	1.2	0.1	14.7	18.9	7.8	5.8	0.6	838
25–29	49.8	1,574	56.1	25.3	0.9	0.4	0.7	14.2	20.1	6.3	4.6	0.3	784
30–34	50.7	1,260	58.5	30.4	0.7	0.2	0.3	15.6	16.9	4.2	3.0	0.5	639
35–39	52.1	1,060	58.9	28.0	0.5	0.8	0.0	17.3	20.9	4.9	5.8	0.4	553
40–44	52.4	843	61.2	25.7	0.6	1.1	0.8	10.7	18.1	2.0	5.1	0.8	442
45–49	52.3	616	57.0	21.4	0.2	0.4	0.4	17.3	20.1	2.6	8.2	0.4	323
Residence													
Urban	51.9	3,827	52.0	42.4	1.2	1.0	0.5	11.7	12.6	7.0	4.7	0.2	1,986
Rural	44.6	5,411	59.7	15.8	0.7	0.9	0.2	16.1	22.6	3.5	7.6	0.6	2,411
Subregion													
Kampala	54.9	279	35.2	75.6	1.1	0.6	0.0	6.9	4.6	10.3	3.7	0.0	153
Buganda	55.9	2,772	52.3	49.6	1.9	1.7	0.7	8.8	9.4	7.4	3.0	0.1	1,551
South Buganda	57.2	1,748	48.4	58.1	2.5	1.8	0.9	8.3	8.5	8.3	3.2	0.2	1,000
North Buganda	53.8	1,024	59.5	34.1	0.8	1.5	0.3	9.9	11.1	5.7	2.7	0.0	551
Busoga	56.3	728	68.0	19.1	0.2	0.2	0.3	6.5	16.0	1.4	4.3	0.0	410
Bukedi	48.9	503	49.5	13.6	0.0	0.3	0.0	36.4	27.2	4.3	11.0	0.0	246
Elgon	37.2	386	35.9	12.3	0.5	1.0	0.0	27.6	21.8	7.8	30.3	0.0	144
Teso	47.4	481	47.9	2.3	0.7	0.9	0.6	17.7	45.7	2.8	13.2	0.4	228
Lango	44.1	538	59.9	0.0	1.1	0.0	0.0	27.7	26.1	1.0	5.9	0.0	237
Acholi	47.0	368	45.1	6.2	0.3	1.0	0.3	38.2	41.7	4.0	7.7	0.0	173
Karamoja	48.7	259	44.3	2.3	0.0	0.4	0.4	47.8	60.3	2.2	12.7	0.0	126
West Nile	31.2	607	47.5	6.6	0.0	0.0	0.0	19.3	41.5	1.9	9.8	0.5	189
Bunyoro	33.5	610	72.6	11.1	0.0	0.3	0.0	11.9	8.4	3.7	9.2	0.0	204
Toro	41.1	625	66.8	16.9	1.1	1.5	0.3	3.6	14.8	6.2	6.3	5.6	257
Ankole	45.8	724	73.7	26.6	0.0	0.8	0.4	2.3	4.6	5.2	1.6	0.0	332
Kigezi	40.9	361	77.2	15.8	1.0	0.0	0.5	4.7	10.1	1.5	2.8	0.0	147
Special areas													
IRS districts[1]	43.8	1,000	48.4	11.6	0.0	0.2	0.3	24.9	37.6	3.0	9.1	0.2	438
SMC districts[2]	48.7	259	44.3	2.3	0.0	0.4	0.4	47.8	60.3	2.2	12.7	0.0	126
High altitude districts[3]	39.7	699	58.2	13.9	0.8	0.5	0.3	15.3	14.4	4.8	16.1	0.0	278
Education													
No education	37.5	842	56.3	6.2	0.0	0.0	0.6	22.9	31.1	0.7	5.7	1.4	316
Primary	42.0	4,616	61.1	15.3	0.6	0.2	0.2	16.0	21.5	1.2	6.8	0.7	1,940
Secondary	55.0	3,115	53.2	40.1	1.5	1.4	0.5	11.4	12.6	7.1	6.2	0.1	1,715
More than secondary	64.1	664	45.9	51.0	1.1	3.1	0.5	9.7	14.9	17.8	4.9	0.0	426
Wealth quintile													
Lowest	37.2	1,719	47.2	1.3	0.5	0.0	0.2	27.8	41.5	1.0	11.3	1.0	640
Second	41.1	1,625	64.2	1.9	0.1	0.6	0.4	17.9	23.3	1.3	8.7	1.2	668
Middle	44.6	1,669	66.1	7.7	0.8	0.4	0.4	15.1	17.8	2.6	7.2	0.1	745
Fourth	53.0	1,972	64.8	28.9	0.5	0.9	0.3	11.8	13.1	4.0	4.5	0.1	1,046
Highest	57.6	2,253	43.9	64.8	2.1	1.9	0.5	6.7	8.0	11.2	3.5	0.2	1,298
Total	47.6	9,238	56.2	27.8	1.0	0.9	0.4	14.1	18.1	5.1	6.3	0.4	4,397

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 5.2 Knowledge of ways to avoid malaria

Percentage of women age 15–49 who stated there are ways to avoid getting malaria; and among women who stated there are ways to avoid getting malaria, percentage reporting specific ways to avoid getting malaria, according to background characteristics, Uganda MIS 2024–25

Background characteristic	Percentage who stated there are ways to avoid getting malaria	Number of women	Percentage who reported specific ways to avoid getting malaria: Sleep under mosquito net or ITN	Use mosquito repellent	Take preventive medication	Spray house with insecticide	Fill in stagnant waters (puddles)	Keep surroundings clean	Put mosquito screen on windows	Other	Don't know	Number of women who stated there are ways to avoid getting malaria
Age												
15–19	90.9	2,047	97.5	3.6	4.3	9.8	38.1	48.5	3.2	3.3	0.2	1,861
20–24	92.9	1,838	96.9	3.4	5.1	7.6	29.2	40.0	2.6	3.7	0.2	1,707
25–29	94.7	1,574	97.9	1.8	5.7	7.9	25.5	38.2	3.3	3.1	0.1	1,490
30–34	94.1	1,260	97.0	4.2	4.2	7.9	24.5	35.0	4.4	4.1	0.0	1,186
35–39	94.3	1,060	97.9	3.6	5.9	8.1	27.1	38.4	3.8	5.1	0.0	1,000
40–44	93.9	843	96.4	2.1	3.7	6.4	24.8	37.9	4.5	2.7	0.3	791
45–49	94.6	616	96.2	2.5	5.2	9.2	24.6	39.2	4.5	6.8	0.0	583
Residence												
Urban	94.6	3,827	97.3	4.6	4.5	10.1	32.2	42.6	3.8	3.2	0.1	3,620
Rural	92.4	5,411	97.2	2.1	5.2	6.8	26.4	38.8	3.4	4.3	0.1	4,998
Subregion												
Kampala	96.4	279	97.9	7.7	2.6	11.9	33.6	34.6	4.6	3.1	0.0	269
Buganda	95.9	2,772	97.3	4.7	3.8	9.3	29.8	36.5	5.0	2.2	0.1	2,657
South Buganda	97.5	1,748	97.6	6.5	4.6	12.0	32.1	39.4	6.1	3.2	0.1	1,705
North Buganda	93.0	1,024	96.9	1.3	2.5	4.6	25.6	31.3	3.1	0.3	0.0	953
Busoga	95.3	728	98.3	0.5	6.4	4.8	19.1	38.2	1.5	1.1	0.1	694
Bukedi	88.8	503	98.5	3.8	8.9	19.7	38.3	52.5	1.7	4.5	0.0	446
Elgon	92.2	386	95.5	3.7	5.0	8.0	35.4	44.6	1.5	17.7	0.4	355
Teso	89.8	481	98.2	4.6	4.9	8.3	26.0	35.4	4.3	2.8	0.0	432
Lango	95.5	538	96.3	1.8	5.5	7.4	29.6	36.8	1.9	1.6	0.7	514
Acholi	94.6	368	97.0	5.1	10.2	10.0	44.4	50.9	4.2	0.8	0.2	348
Karamoja	94.3	259	94.0	3.7	14.8	6.7	24.3	56.4	3.9	10.3	0.0	244
West Nile	89.9	607	95.8	2.3	6.7	10.2	19.7	46.4	1.0	1.8	0.0	545
Bunyoro	86.5	610	97.8	2.1	2.9	3.0	20.5	32.0	5.3	4.5	0.0	527
Toro	85.4	625	97.4	0.2	3.8	5.1	22.8	40.4	3.9	5.9	0.2	533
Ankole	97.2	724	97.7	1.4	2.1	5.5	32.2	44.2	3.6	3.5	0.0	704
Kigezi	96.8	361	97.3	0.2	0.6	4.4	38.7	44.4	1.2	10.4	0.2	349
Special areas												
IRS districts[1]	89.8	1,000	97.8	2.7	6.1	16.1	26.8	45.3	1.8	2.4	0.0	897
SMC districts[2]	94.3	259	94.0	3.7	14.8	6.7	24.3	56.4	3.9	10.3	0.0	244
High altitude districts[3]	95.2	699	96.7	2.0	2.9	6.4	37.4	45.2	1.4	13.6	0.3	666
Education												
No education	85.9	842	96.0	0.9	7.7	3.4	14.0	30.8	1.7	3.3	0.1	723
Primary	91.2	4,616	96.8	1.5	4.1	5.7	20.9	33.7	3.0	4.3	0.2	4,208
Secondary	97.2	3,115	98.0	4.2	4.2	10.9	39.4	48.7	3.8	3.4	0.0	3,030
More than secondary	98.9	664	98.1	11.3	9.5	17.4	47.8	55.6	8.0	3.8	0.0	657
Wealth quintile												
Lowest	87.5	1,719	96.0	2.0	7.5	6.6	22.5	38.1	2.4	3.1	0.2	1,504
Second	90.4	1,625	96.6	0.8	4.0	5.1	22.8	35.3	2.2	5.4	0.2	1,469
Middle	93.9	1,669	98.0	1.0	3.8	5.4	25.9	36.9	3.0	4.8	0.1	1,568
Fourth	96.7	1,972	97.8	2.3	3.6	7.7	32.0	44.0	4.3	3.6	0.2	1,907
Highest	96.3	2,253	97.5	7.7	5.6	13.9	36.8	44.8	4.9	2.8	0.0	2,170
Total	93.3	9,238	97.2	3.1	4.9	8.2	28.9	40.4	3.5	3.8	0.1	8,618

IRS = indoor residual spraying; ITN = insecticide-treated net; SMC = seasonal malaria chemoprevention

[1] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[2] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[3] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 5.3 Malaria susceptibility, severity, and self-efficacy

Percentages of women age 15–49 who expressed specific perceptions about malaria susceptibility, the severity of malaria, and self-efficacy, according to background characteristics, Uganda MIS 2024–25

	Perceived susceptibility			Perceived severity			Perceived self-efficacy			
Background characteristic	Percentage who disagreed that people in the community only get malaria during the rainy season	Percentage who agreed that when a child has a fever, they almost always worry it might be malaria	Percentage who perceived that their families and communities are at risk for malaria[1]	Percentage who disagreed that getting malaria is not a problem because it can be easily treated	Percentage who disagreed that only weak children can die from malaria	Percentage who felt that the consequences of malaria are serious[2]	Percentage who agreed that they can sleep under a mosquito net for the entire night when there are lots of mosquitoes	Percentage who agreed that they can sleep under a mosquito net for the entire night when there are few mosquitoes	Percentage who were confident in their ability to perform specific malaria-related behaviours[3]	Number of women
Age										
15–19	32.6	72.7	83.4	40.3	65.0	71.0	81.6	76.4	85.4	2,047
20–24	35.2	78.0	87.5	45.3	62.5	70.4	82.2	78.1	86.0	1,838
25–29	37.3	78.7	88.2	40.8	66.0	71.7	82.9	79.8	86.2	1,574
30–34	39.0	79.1	87.6	44.4	67.2	72.7	83.0	79.8	86.9	1,260
35–39	37.5	78.7	88.8	44.0	64.9	70.3	82.7	79.9	86.0	1,060
40–44	36.5	83.2	91.4	43.9	63.6	70.1	85.8	80.0	88.7	843
45–49	39.9	80.5	90.9	46.7	65.7	73.6	84.0	82.2	88.1	616
Living children under age 5										
One or more	37.9	80.6	89.4	43.2	64.7	70.9	84.8	81.3	88.0	4,513
None	34.5	75.2	85.5	43.0	65.0	71.5	80.9	76.6	84.9	4,725
Residence										
Urban	35.8	76.8	87.4	44.5	66.9	72.8	82.0	78.1	85.7	3,827
Rural	36.4	78.5	87.5	42.1	63.4	70.1	83.4	79.5	86.9	5,411
Subregion										
Kampala	37.9	70.4	84.6	45.9	71.1	76.9	77.8	71.2	80.2	279
Buganda	33.9	74.7	86.8	41.0	63.7	69.9	79.8	76.7	84.1	2,772
South Buganda	38.1	72.2	86.6	42.9	66.4	72.1	74.2	71.9	79.4	1,748
North Buganda	26.8	79.0	87.0	37.7	59.1	66.2	89.4	85.1	92.1	1,024
Busoga	57.5	78.0	91.6	68.8	84.0	87.4	70.6	68.2	75.6	728
Bukedi	50.0	84.8	91.9	37.2	69.7	75.1	81.4	77.0	87.4	503
Elgon	53.6	82.5	93.5	41.1	74.3	77.8	85.6	83.2	88.4	386
Teso	34.2	78.8	87.1	47.8	67.0	77.2	88.9	82.6	95.5	481
Lango	33.1	88.5	94.9	41.9	48.6	59.6	94.5	92.7	96.1	538
Acholi	50.8	79.7	90.9	62.5	67.5	77.3	73.2	71.6	74.9	368
Karamoja	54.2	82.2	92.6	37.1	59.4	67.1	90.7	82.7	95.8	259
West Nile	29.2	79.7	91.6	46.7	57.1	66.5	88.8	88.4	92.7	607
Bunyoro	36.2	84.3	87.8	24.2	49.7	55.2	93.6	89.4	94.7	610
Toro	25.1	71.5	76.2	45.8	64.1	68.4	65.7	54.6	67.4	625
Ankole	20.3	74.3	81.5	32.7	68.4	73.6	90.8	87.0	94.3	724
Kigezi	13.8	73.6	79.8	38.4	69.4	73.5	97.2	92.3	97.6	361
Special areas										
IRS districts[4]	34.0	84.9	91.7	38.8	61.2	68.3	85.4	82.5	91.2	1,000
SMC districts[5]	54.2	82.2	92.6	37.1	59.4	67.1	90.7	82.7	95.8	259
High altitude districts[6]	32.8	77.2	86.0	40.4	72.6	76.5	90.6	87.0	92.4	699
Education										
No education	38.5	80.8	88.7	39.9	57.2	65.0	83.3	79.4	87.2	842
Primary	35.9	79.1	88.1	41.8	61.5	67.9	83.7	79.2	87.0	4,616
Secondary	35.4	76.7	87.0	44.5	69.5	75.4	81.5	78.6	85.5	3,115
More than secondary	38.9	70.4	83.4	49.4	76.4	82.8	82.1	77.3	85.6	664
Wealth quintile										
Lowest	37.3	82.3	89.6	42.9	55.8	64.5	84.4	80.3	88.7	1,719
Second	38.1	79.7	88.9	43.2	64.4	70.5	82.1	78.7	85.4	1,625
Middle	36.1	79.2	88.2	40.9	64.4	70.0	83.9	78.7	86.7	1,669
Fourth	33.9	76.1	87.2	42.4	66.7	72.4	82.7	80.9	86.6	1,972
Highest	35.9	73.4	84.5	45.5	70.9	76.8	81.4	76.3	85.0	2,253
Total	36.2	77.8	87.4	43.1	64.9	71.2	82.8	78.9	86.4	9,238

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes women who disagree that people in the community only get malaria during the rainy season, or agree that when a child has a fever they almost always worry it might be malaria

[2] Includes women who disagree that getting malaria is not a problem because it can be easily treated, or disagree that only weak children can die from malaria

[3] Includes women who agree that they can sleep under a mosquito net for the entire night when there are lots of mosquitoes, or agree that they can sleep under a mosquito net for the entire night when there are few mosquitoes

[4] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

[5] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[6] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

Table 5.4 Attitudes towards malaria-related behaviours and perceptions of community norms

Percentages of women age 15–49 who expressed specific attitudes regarding malaria-related behaviours, who had favourable attitudes towards specific malaria-related behaviours, who expressed specific perceptions regarding community norms, and who believed the majority of their community currently practices specific malaria-related behaviours, according to background characteristics, Uganda MIS 2024–25

	Attitudes towards malaria-related behaviours			Perceptions of community norms			
Background characteristic	Percentage who disagreed that they do not like sleeping under a mosquito net when the weather is too warm	Percentage who disagreed that when a child has a fever it is best to start giving them any medicine they have at home	Percentage who had a favourable attitude towards specific malaria-related behaviours[1]	Percentage who agreed that people in the community usually take their children to a healthcare provider on the same day or the day after they develop a fever	Percentage who agreed that people in the community who have a mosquito net usually sleep under a mosquito net every night	Percentage who believed the majority of their community currently practices specific malaria-related behaviours[2]	Number of women
Age							
15–19	50.3	53.4	73.4	55.5	53.1	68.6	2,047
20–24	55.6	55.2	76.7	59.7	57.1	72.2	1,838
25–29	57.8	55.7	77.4	54.8	55.0	68.9	1,574
30–34	55.4	55.8	75.8	54.9	56.6	71.7	1,260
35–39	58.2	52.4	76.2	57.5	58.7	72.4	1,060
40–44	52.8	51.0	72.0	58.4	56.4	72.3	843
45–49	51.1	56.8	76.1	54.7	56.5	70.1	616
Living children under age 5							
One or more	56.6	52.8	75.1	57.6	57.3	71.7	4,513
None	52.5	55.9	75.7	55.6	54.6	69.7	4,725
Residence							
Urban	55.2	57.3	76.5	52.8	51.3	66.7	3,827
Rural	54.0	52.3	74.7	59.2	59.1	73.5	5,411
Subregion							
Kampala	60.7	56.9	79.6	36.8	40.6	53.3	279
Buganda	57.0	49.1	73.7	44.4	48.2	62.9	2,772
South Buganda	56.5	51.6	74.3	44.2	44.7	59.9	1,748
North Buganda	57.8	44.8	72.7	44.7	54.2	67.9	1,024
Busoga	75.1	76.0	90.3	61.2	52.8	71.1	728
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Teso	42.2	26.6	55.1	66.0	76.7	88.1	481
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Karamoja	43.4	41.3	62.3	70.3	62.2	78.5	259
West Nile	47.7	61.3	77.1	63.6	57.4	70.8	607
Bunyoro	45.4	38.7	63.9	72.8	73.9	87.2	610
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Kigezi	41.4	70.4	80.2	43.7	51.7	65.2	361
Special areas							
IRS districts[3]	54.0	54.1	77.3	63.9	59.1	76.7	1,000
SMC districts[4]	43.4	41.3	62.3	70.3	62.2	78.5	259
High altitude districts[5]	54.2	65.8	82.8	52.0	54.4	70.0	699
Education							
No education	49.0	46.2	69.5	61.9	55.3	71.8	842
Primary	54.3	52.1	74.3	59.2	59.0	72.8	4,616
Secondary	56.8	57.1	77.9	52.1	53.4	68.4	3,115
More than secondary	52.4	68.3	79.6	52.8	46.7	65.3	664
Wealth quintile							
Lowest	49.5	47.1	69.6	66.3	65.8	78.4	1,719
Second	53.6	50.9	72.9	57.7	56.2	70.8	1,625
Middle	55.7	54.5	76.5	59.6	57.7	74.3	1,669
Fourth	57.5	55.5	78.1	54.4	54.5	68.7	1,972
Highest	55.6	61.5	78.6	48.0	48.0	63.8	2,253
Total	54.5	54.4	75.4	56.6	55.9	70.7	9,238

IRS = indoor residual spraying; SMC = seasonal malaria chemoprevention

[1] Includes women who disagree that they do not like sleeping under a mosquito net when the weather is too warm, or disagree that when a child has a fever it is best to start giving them any medicine they have at home

[2] Includes women who agree that people in the community usually take their children to a healthcare provider on the same day or the day after they develop a fever, or agree that people in the community who have a mosquito net usually sleep under a mosquito net every night

[3] Includes the 20 IRS districts of Adjumani, Arua, Madi-Okollo, Koboko, Maracha, Moyo, Yumbe, Obongi, Terego, Amolatar, Dokolo, Kaberamaido, Kalakhei, Budaka, Butaleja, Pallisa, Tororo, Bugiri, Butebo, and Namutumba

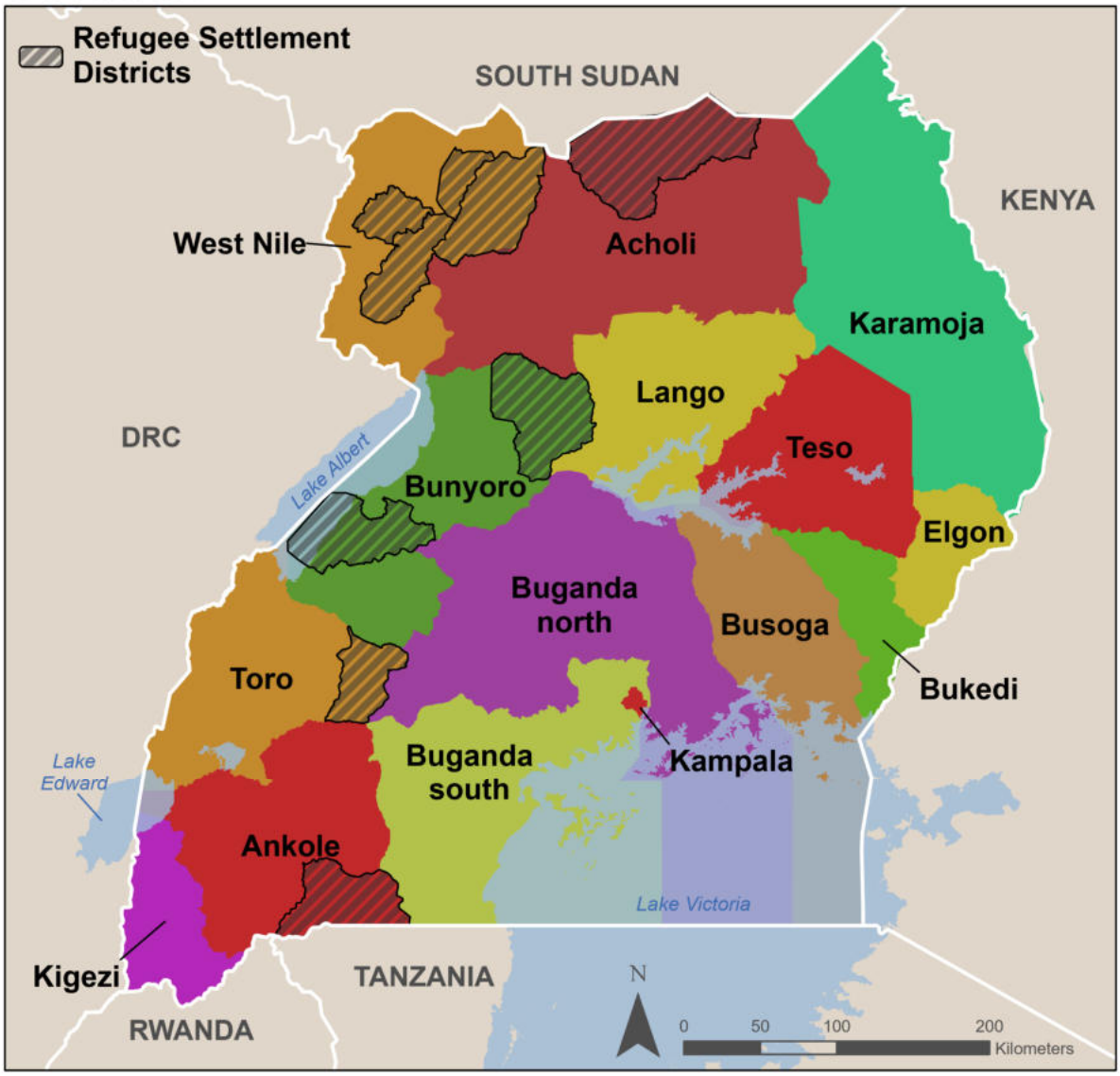
[4] Includes the 9 SMC districts of Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit, Karenga, Nabilatuk, and Napa

[5] Includes the 15 high altitude districts of Bulambuli, Kapchorwa, Kween, Bududa, Manafwa, Mbale, Namisindwa, Sironko, Bukwo, Kabale, Kisoro, Kanungu, Rukungiri, Rubanda, and Rukiga

REFUGEE SETTLEMENTS 6

Since the refugee settlements used separate sampling frames, their results are presented separately. **Map 6.1** shows the distribution of the refugee settlements. **Table 6.1**–**Table 6.8** present selected results from those settlements.

Map 6.1 **Refugee settlements**



List of Tables

For detailed information on the refugee settlements in Uganda, see the following tables:

- **Table 6.1 Drinking water service ladder: Refugee settlements**
- **Table 6.2 Sanitation service ladder: Refugee settlements**
- **Table 6.3 Household possession of mosquito nets: Refugee settlements**
- **Table 6.4 Use of mosquito nets by children: Refugee settlements**
- **Table 6.5 Use of mosquito nets by pregnant women: Refugee settlements**
- **Table 6.6 Children with fever and care seeking, prompt treatment, and diagnosis: Refugee settlements**
- **Table 6.7 Source of advice or treatment for children with fever: Refugee settlements**
- **Table 6.8 Prevalence of malaria in children: Refugee settlements**

Table 6.1 Drinking water service ladder: Refugee settlements

Percent distribution of de jure population by drinking water service ladder, according to background characteristics, Uganda MIS 2024–25 (refugee settlements)

Background characteristic	At least basic service[1]	Limited service[2]	Unimproved[3]	Surface water	Total	Number of persons
Total	54.9	11.1	2.2	31.8	100.0	3,062

Note: Service ladder concept/definitions are based on the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP).
[1] Defined as drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less. Includes safely managed drinking water, which is not shown separately.
[2] Drinking water from an improved source, provided round-trip collection time is more than 30 minutes or is unknown
[3] Drinking water from an unprotected dug well or unprotected spring

Table 6.2 Sanitation service ladder: Refugee settlements

Percent distribution of de jure population by type of sanitation service, according to background characteristics, Uganda MIS 2024–25 (refugee settlements)

Background characteristic	At least basic service[1]	Limited service[2]	Unimproved[3]	Open defaecation	Total	Number of persons
Total	19.1	8.4	70.1	2.4	100.0	3,062

Note: Service ladder concept/definitions are based on the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP).
[1] Defined as use of improved facilities that are not shared with other households. Includes safely managed sanitation service, which is not shown separately.
[2] Defined as use of improved facilities shared by two or more households
[3] Use of flush/pour flush toilets not to sewer, septic tank, or pit latrine; pit latrines without a slab/open pit; hanging toilets/latrines; or buckets

Table 6.3 Household possession of mosquito nets: Refugee settlements

Percentages of households with at least one mosquito net (treated or untreated) and with at least one insecticide-treated net (ITN); average number of nets and ITNs per household; and percentage of households with at least one net or ITN per two persons who stayed in the household the night before the survey, Uganda MIS 2024–25 (refugee settlements)

	Percentage of households with at least one mosquito net		Average number of nets per household			Percentage of households with at least one net for every two persons who stayed in the household last night[1]		Number of households with at least one person who stayed in the household last night
	Any mosquito net	ITN[2]	Any mosquito net	ITN[2]	Number of households	Any mosquito net	ITN[2]	
Total	51.9	51.1	1.1	1.1	590	21.1	20.7	589

[1] De facto household members
[2] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

Table 6.4 Use of mosquito nets by children: Refugee settlements

Percentages of children under age 5 who slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN) the night before the survey; and among children under age 5 in households with at least one ITN, percentage who slept under an ITN the night before the survey, Uganda MIS 2024–25 (refugee settlements)

	Children under age 5 in all households			Children under age 5 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Age in months					
<12	48.0	47.3	71	82.7	41
12–23	36.9	35.9	93	71.3	47
24–35	36.4	36.4	100	70.4	52
36–47	24.5	24.2	111	54.8	49
48–59	44.6	44.6	115	70.9	72
Sex					
Male	38.8	38.4	230	73.0	121
Female	36.2	35.9	260	66.8	140
Total	37.4	37.0	490	69.7	260

Note: Table is based on children who stayed in the household the night before the interview.
[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

Table 6.5 Use of mosquito nets by pregnant women: Refugee settlements

Percentages of pregnant women age 15–49 who slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN) the night before the survey; and among pregnant women age 15–49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, Uganda MIS 2024–25 (refugee settlements)

	Pregnant women age 15–49 in all households			Pregnant women age 15–49 in households with at least one ITN[1]	
	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of pregnant women	Percentage who slept under an ITN[1] last night	Number of pregnant women
Total	32.6	32.6	73	(77.9)	31

Note: Table is based on women who stayed in the household the night before the interview. Figures in parentheses are based on 25–49 unweighted cases.
[1] An ITN is a factory-treated net that does not require any further treatment. In the 2014–15 UMIS, it was known as a long-lasting insecticidal net (LLIN).

Table 6.6 Children with fever and care seeking, prompt treatment, and diagnosis: Refugee settlements

Percentage of children under age 5 with fever in the 2 weeks preceding the survey; and among children under age 5 with fever, percentage for whom advice or treatment was sought, percentage for whom advice or treatment was sought the same or next day following the onset of fever, percentage who had blood taken from a finger or heel for testing, and percentage who were diagnosed with malaria by a healthcare provider, Uganda MIS 2024–25 (refugee settlements)

	Children under age 5		Children under age 5 with fever				
Background characteristic	Percentage with fever in the 2 weeks preceding the survey	Number of children	Percentage for whom advice or treatment was sought[1]	Percentage for whom advice or treatment was sought the same or next day[1]	Percentage who had blood taken from a finger or heel for testing	Percentage who were diagnosed with malaria by a healthcare provider	Number of children
Age in months							
<12	31.4	70	(84.7)	(64.7)	(51.0)	(23.8)	22
12–23	25.0	82	*	*	*	*	20
24–35	21.8	99	(83.3)	(60.4)	(53.0)	(52.2)	22
36–47	35.4	94	(63.4)	(48.4)	(46.7)	(48.6)	33
48–59	15.3	105	(77.8)	(54.9)	(71.1)	(53.9)	16
Sex							
Male	22.2	218	83.1	66.1	69.9	58.1	48
Female	28.0	231	76.8	57.5	53.2	45.4	65
Mother's education							
No education	33.5	204	78.4	66.8	63.0	57.8	69
Primary	19.0	204	78.3	52.8	53.7	44.1	39
Secondary	(14.7)	39	*	*	*	*	6
More than secondary	*	2	*	*	*	*	0
Total	25.2	449	79.5	61.2	60.3	50.8	113

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes advice or treatment from the following sources: public sector, private medical sector, shop, market, and hawker/itinerant drug seller. Excludes advice or treatment from a traditional practitioner.

Table 6.7 Source of advice or treatment for children with fever: Refugee settlements

Percentage of children under age 5 with fever in the 2 weeks preceding the survey for whom advice or treatment was sought from specific sources; and among children under age 5 with fever in the 2 weeks preceding the survey for whom advice or treatment was sought, percentage for whom advice or treatment was sought from specific sources, Uganda MIS 2024–25 (refugee settlements)

	Percentage for whom advice or treatment was sought from each source:	
Source	Among children with fever	Among children with fever for whom advice or treatment was sought
Public sector	**60.0**	**73.3**
Government hospital	9.6	11.7
Government health centre	46.6	57.0
Village health worker/team or community health worker	3.8	4.6
Private medical sector (non-NGO)	**19.9**	**24.4**
Private hospital/clinic	11.1	13.5
Pharmacy	8.4	10.3
Mobile clinic	0.2	0.3
Other private medical sector	0.5	0.6
Other private sector	**2.3**	**2.8**
Shop	0.7	0.9
Traditional practitioner	1.6	1.9
Other	0.8	1.0
Number of children	113	92

Note: Advice or treatment for children with fever may have been sought from more than one source.
NGO = nongovernmental organisation

Table 6.8 Prevalence of malaria in children: Refugee settlements

Percentage of children age 6–59 months classified by two tests as having malaria, according to background characteristics, Uganda MIS 2024–25 (refugee settlements)

	Malaria prevalence according to RDT		Malaria prevalence according to microscopy		Malaria prevalence according to real-time PCR	
Background characteristic	RDT positive	Number of children	Microscopy positive	Number of children	PCR positive	Number of children
Age in months						
6–8	(22.3)	17	(14.0)	17	(18.4)	17
9–11	(17.9)	15	(0.0)	15	(0.0)	15
12–17	(10.2)	30	(4.0)	30	(4.0)	30
18–23	(9.6)	61	(1.2)	61	(5.4)	61
24–35	14.9	100	13.8	100	14.5	100
36–47	21.3	110	9.9	110	15.6	110
48–59	15.3	105	13.2	105	15.3	105
Mother's interview status						
Interviewed	15.6	376	9.4	376	12.5	376
Not interviewed[1]	18.1	62	11.9	62	13.2	62
Mother's education[2]						
No education	22.5	170	13.7	170	18.0	170
Primary	10.2	173	7.0	173	8.7	173
Secondary	(6.5)	32	(0.0)	32	(4.5)	32
More than secondary	*	1	*	1	*	1
Total	15.9	438	9.8	438	12.6	438

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
RDT = rapid diagnostic test (Bioline™ Malaria Ag P.f)
[1] Includes children whose mothers are deceased
[2] Excludes children whose mothers are not listed in the Household Questionnaire

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SAMPLE DESIGN

Appendix A

A.1 INTRODUCTION

The 2024–25 Uganda Malaria Indicator Survey (UMIS) is the fourth survey of its kind following the ones implemented in 2009, 2014–15, and 2018–19. The survey used a nationally representative sample of 322 clusters. It was designed to provide information on key malaria control indictors such as the proportion of households having at least one bed net and at least one insecticide-treated net (ITN); the proportions of children under age 5 who slept under a net and who slept under an ITN the previous night; the proportions of pregnant women who slept under a net and who slept under an ITN the previous night; the proportion of pregnant women who received intermittent preventive treatment in pregnancy (IPTp) for malaria during their last pregnancy; and the prevalence of malaria parasitaemia among children under age 5.

The survey was designed to produce representative estimates for the main malaria indicators for the country, for urban and rural areas separately, for each of the 15 subregions, and for three U.S. President's Malaria Initiative (PMI) programme domains: (1) the 15 high altitude districts, (2) the 20 indoor residual spraying (IRS) districts, and (3) the 9 seasonal malaria chemoprevention (SMC) districts. A special sample of 20 clusters was selected from refugee settlements in different subregions to collect data on the main malaria indicators for the refugee settlements independently. Data from refugee settlements were not included in the estimates for indictors among the total sample or for any other survey domains.

A.2 SAMPLING FRAME

The sampling frame used for the 2024–25 UMIS was the Uganda Population and Housing Census (UPHC) conducted in August 2024, provided by the Uganda Bureau of Statistics (UBOS), the implementing agency for the 2024–25 UMIS. The sampling frame was a complete list of the 66,740 natural villages in Uganda. Each village was classified as urban or rural, and its village size was calculated in terms number of households. Village size varied greatly from a minimum of one household to a maximum of 17,904 households per village. Uganda is subdivided into 15 subregions, and each subregion is divided into districts, each district is subdivided into counties, and counties into parishes, with a total of 147 districts. Among the 66,740 villages, 18,434 are urban and 48,306 are rural. The frame used for selecting the refugee clusters was a separate list of 935 rural refugee villages. Refugee village size also varied, from one to 2,012 households per village, although the number of households in some villages was not known.

The three PMI programme areas were defined as follows:

- The 15 high altitude districts: Kapchorwa, Mbale, Sironko, Bududa, Bukwo, Manafwa, Bulambuli, Kween, Namisindwa, Kabale, Kisoro, Rukungiri, Kanungu, Rubanda, and Rukiga
- The 20 IRS districts: Bugiri, Namutumba, Pallisa, Tororo, Budaka, Butaleja, Butebo, Kaberamaido, Kalaki, Amolatar, Dokolo, Arua, Moyo, Maracha, Adjumani, Yumbe, Koboko, Madi-Okollo, Obongi, and Terego
- The 9 SMC districts: Kotido, Moroto, Nakapiripirit, Abim, Kaabong, Amudat, Napak, Nabilatuk, and Karenga

Table A.1 shows the distribution of residential households by subregion and residence. Distribution by subregion varies greatly, with the smallest subregion Karamoja representing only 2.9% of total households and the largest subregion South Buganda representing 18.6% of total households. The proportion of

households in urban areas also varies greatly among subregions, from 16.8% in Teso to 100% in Kampala. In Uganda, 40.8% of the households are in urban areas. **Table A.2** shows the distribution of villages and their average size in number of households. The average urban village size is 245 households, and the average rural village size is 136 households, with an overall average of 166 households per village.

Table A.1 Distribution of residential households by subregion and residence

	Number of households in the frame			Percent distribution	
Subregion	Urban	Rural	Total	Urban	Subregion
Kampala	339,710		339,710	100.0	3.1
South Buganda	1,268,827	789,930	2,058,757	61.6	18.6
North Buganda	597,898	781,375	1,379,273	43.3	12.5
Busoga	312,536	595,102	907,638	34.4	8.2
Bukedi	156,063	400,331	556,394	28.0	5.0
Elgon	142,389	318,901	461,290	30.9	4.2
Teso	85,310	421,511	506,821	16.8	4.6
Lango	188,788	425,982	614,770	30.7	5.6
Acholi	149,981	305,323	455,304	32.9	4.1
Karamoja	76,455	239,637	316,092	24.2	2.9
West Nile	191,188	471,764	662,952	28.8	6.0
Bunyoro	206,432	451,862	658,294	31.4	5.9
Toro	284,377	494,917	779,294	36.5	7.0
Ankole	398,025	525,897	923,922	43.1	8.3
Kigezi	119,743	331,287	451,030	26.5	4.1
Total	4,517,722	6,553,819	11,071,541	40.8	100.0
Refugee settlements		118,203	118,203		100.0

Source: 2024 population census frame, Uganda

Table A.2 Distribution of villages and their average size in number of households by subregion and residence

	Number of villages in the frame			Average number of households per village		
Subregion	Urban	Rural	Total	Urban	Rural	Total
Kampala	849		849	400		400
South Buganda	1,384	3,005	4,389	917	263	469
North Buganda	1,721	3,895	5,616	347	201	246
Busoga	1,317	3,223	4,540	237	185	200
Bukedi	873	2,978	3,851	179	134	144
Elgon	2,099	6,004	8,103	68	53	57
Teso	528	2,875	3,403	162	147	149
Lango	1,252	4,334	5,586	151	98	110
Acholi	745	3,207	3,952	201	95	115
Karamoja	626	2,131	2,757	122	112	115
West Nile	1,367	4,561	5,928	140	103	112
Bunyoro	924	2,480	3,404	223	182	193
Toro	1,720	3,179	4,899	165	156	159
Ankole	2,291	3,974	6,265	174	132	147
Kigezi	738	2,460	3,198	162	135	141
Total	18,434	48,306	66,740	245	136	166
Refugee settlements		935	935		145	145

Source: 2024 population census frame, Uganda

A.3 Sampling Procedure and Sample Allocation

The sample for the 2024–25 UMIS was a stratified sample selected in two stages from the 2024 population census frame. Stratification was achieved by separating the subregions into urban and rural strata. A total of 30 sampling strata were identified, since Kampala has no rural areas and the refugee settlements form a single stratum. In the first stage of sampling, samples were selected independently from each stratum according to the sample allocation given in **Table A.3** using a probability proportional to size selection procedure. Before the sample selection, the sampling frame was sorted within sampling stratum by other lower-level administrative units. With this sorting and sampling procedure, implicit stratification and proportional allocation were achieved at all lower-level administrative units.

Since the census frame and household listing were still fresh at the time of the survey and the survey funds were limited, an independent household list was not created for the 2024–25 UMIS except for the

20 clusters selected in the refugee settlements. The households in the 20 selected refugee clusters were listed right before data collection. After the first stage of sampling, sample households were selected directly from the census listing (except for the fresh listing for refugee settlements). In the second stage, a targeted number of 28 households per cluster (the sample take) were selected. Before the household selection, a validation exercise was carried out in two urban and two rural clusters to determine the percentage of sampled households that could be found in the field. Due to challenges in numbering the structures and households in the census listing, the validation exercise showed that not all the selected households could be identified in the field. This exercise led to a decision to oversample; instead of selecting 28 households per cluster, 36 households were selected per cluster in Kampala and other major urban areas, and 30 households were selected per cluster in the rest of the areas.

Table A.3 shows the sample allocation of clusters and households by subregion and residence, taking the sample adjustments into consideration. The survey interviewers were asked to interview only the preselected households. No replacements and no changes of the preselected households were allowed in the implementation stages to prevent bias. **Table A.4** shows the expected number of women age 15–49 years interviewed and the expected number of children age 6–59 months tested for malaria, by subregion and residence. Of note, 38 clusters were selected from the 15 high altitude districts, 37 clusters selected from the 20 IRS districts, and 20 clusters selected from the 9 SMC districts. These were adequate sample sizes for third-level survey domains.

Table A.3 Sample allocation of clusters and households by subregion and residence

	Number of clusters allocated			Number of households allocated		
Subregion	Urban	Rural	Total	Urban	Rural	Total
Kampala	21		21	756		756
South Buganda	15	10	25	534	318	852
North Buganda	11	14	25	348	438	786
Busoga	8	14	22	252	420	672
Bukedi	6	14	20	180	420	600
Elgon	6	14	20	192	420	612
Teso	4	16	20	126	480	606
Lango	7	14	21	228	420	648
Acholi	7	13	20	228	390	618
Karamoja	5	15	20	150	450	600
West Nile	7	15	22	222	450	672
Bunyoro	8	14	22	252	420	672
Toro	9	13	22	276	390	666
Ankole	10	12	22	312	360	672
Kigezi	6	14	20	180	420	600
Total	130	192	322	4,236	5,796	10,032
Refugee settlements		20	20		600	600

Note: Thirty-six households were selected per cluster in Kampala and other major urban areas, and 30 households were selected per cluster in the rest of the areas.

Table A.4 Expected numbers of women age 15–49 years interviewed and children age 6–59 months tested for malaria, by subregion and residence

	Women age 15–49 years			Children age 6–59 months		
Subregion	Urban	Rural	Total	Urban	Rural	Total
Kampala	557		557	411		411
South Buganda	397	266	663	293	202	495
North Buganda	291	371	662	215	283	498
Busoga	212	371	583	157	283	440
Bukedi	160	371	531	118	283	401
Elgon	160	371	531	118	283	401
Teso	106	426	532	78	324	402
Lango	185	371	556	137	283	420
Acholi	185	346	531	137	263	400
Karamoja	132	399	531	98	303	401
West Nile	185	399	584	137	303	440
Bunyoro	212	371	583	157	283	440
Toro	239	346	585	176	263	439
Ankole	266	319	585	196	242	438
Kigezi	160	371	531	118	283	401
Total	3,447	5,098	8,545	2,546	3,881	6,427
Refugee settlements		570	570		433	433

The sample calculation was based on the results of the 2018–19 UMIS: The average number of women age 15–49 per household was 1.05 in urban areas and 1.02 in rural areas, the women response rates were 98% in both urban and rural areas, the household response rates were 92% in urban areas and 95% in rural areas, and the average numbers of children age 6–59 months per household were 0.66 in urban areas and 0.84 in rural areas.

A.4 Sampling Weight Calculation

Because of the non-proportional allocation of the sample to the different subregions and the different response rates across the sampling strata, sampling weights were required for any analysis using 2024–25 UMIS data to ensure that they were representative of the actual sample. Since the 2024–25 UMIS sample was a two-stage stratified cluster sample, sampling weights were calculated based on sampling probabilities, which were calculated separately for each sampling stage and for each cluster. We used the following notations:

P_{1hi}: sampling probability of the ith cluster in stratum h

P_{2hi}: sampling probability of households within the ith cluster in stratum h

P_{hi}: overall sampling probability of households within the ith cluster in stratum h

Let n_h be the number of clusters selected in stratum h for the 2024 UPHC, M_{hi} be the number of households according to the sampling frame in the ith cluster, and $\sum M_{hi}$ be the total number of households in stratum h. The probability of selecting the ith cluster in stratum h for the 2024–25 UMIS is calculated as follows:

$$P_{1hi} = \frac{n_h \, M_{hi}}{\sum M_{hi}}$$

Let L_{hi} and m_{hi} be the number of households listed and selected in the ith cluster in stratum h. The probability for selecting a household in the ith cluster in stratum h is calculated as follows:

$$P_{2hi} = \frac{m_{hi}}{L_{hi}} s_{hi}$$

where s_{hi} is the proportion of the segment selected if the cluster was segmented, and $s_{hi} = 1$ otherwise.

The overall selection probability of each household in cluster i of stratum h is therefore the product of the two stages of selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

The design weight for each household in cluster i of stratum h is the inverse of its overall selection probability:

$$W_{hi} = 1 / P_{hi}$$

A spreadsheet containing all sampling parameters and selection probabilities was constructed to facilitate the calculation of sampling weights. Design weights were adjusted for both household and individual non-responses to obtain the sampling weights for households and women, respectively. Individual non-response

accounted for differences between the household and individual sampling weights. All sampling weights were further normalised at the national level to produce unweighted cases equal to weighted cases for interviewed households and interviewed women age 15–49, respectively. The weights for the 20 refugee clusters were normalised separately. Of note, the normalised weights were relative weights, which are valid for estimating proportions, means, ratios, and rates but not valid for estimating population totals or for pooling data from different surveys. As a result of this study design, data from the 20 refugee clusters could not be tabulated with the main survey data.

A.5 Survey Results

Table A.5 shows percent distributions of the selected 2024–25 UMIS sample, as well as household and individual response rates to the survey.

Table A.5 Sample implementation: Women

Percent distributions of selected households and eligible women age 15–49 by outcome of attempted household and individual interviews; numbers of sampled households and women; and household, eligible women, and overall women response rates, according to residence and subregion (unweighted), Uganda MIS 2024–25

	Residence		Subregion																	
Result	Urban	Rural	Kampala	Buganda	South Buganda	North Buganda	Busoga	Bukedi	Elgon	Teso	Lango	Acholi	Karamoja	West Nile	Bunyoro	Toro	Ankole	Kigezi	Total	Refugee settlements
Selected households																				
Completed (C)	92.8	95.7	86.8	91.3	90.3	92.4	97.7	97.0	98.0	92.9	97.7	98.7	94.5	94.2	97.5	94.1	93.9	95.0	94.5	98.3
Household present but no competent respondent at home (HP)	0.6	0.4	0.8	0.9	0.9	0.8	0.0	0.4	0.0	0.7	0.2	0.2	0.7	0.6	0.1	0.5	0.6	0.3	0.5	0.3
Refused (R)	0.5	0.1	1.1	0.7	0.9	0.4	0.0	0.0	0.0	0.2	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.7	0.3	0.2
Dwelling not found (DNF)	0.6	0.5	1.1	0.2	0.1	0.4	0.0	0.5	0.2	1.5	0.2	0.0	1.3	0.6	0.6	0.9	0.3	0.2	0.5	0.0
Household absent (HA)	1.0	1.1	0.5	1.3	0.7	1.9	0.0	0.5	0.3	3.0	1.2	0.3	1.7	0.4	0.1	0.9	2.2	2.8	1.1	1.0
Dwelling vacant/ address not a dwelling (DV)	4.0	1.5	9.7	4.7	5.8	3.6	2.1	1.6	0.3	0.5	0.6	0.2	1.0	3.6	0.7	2.6	2.7	0.7	2.6	0.2
Dwelling destroyed (DD)	0.2	0.3	0.0	0.4	0.4	0.4	0.1	0.0	0.5	0.2	0.2	0.0	0.5	0.0	0.4	0.9	0.0	0.0	0.2	0.0
Other (O)	0.3	0.4	0.1	0.6	0.9	0.3	0.0	0.0	0.7	1.2	0.0	0.2	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	4,220	5,791	756	1,638	852	786	702	571	596	606	648	611	600	672	672	666	673	600	10,011	600
Household response rate (HRR)[1]	98.2	99.0	96.8	98.1	97.8	98.4	100.0	99.1	99.8	97.6	99.7	99.3	97.9	98.6	99.1	98.6	99.1	98.8	98.7	99.5
Eligible women																				
Completed (EWC)	96.3	97.4	92.8	96.2	97.3	94.8	97.1	98.5	98.3	95.3	99.1	98.2	96.0	97.1	98.0	98.2	96.5	97.0	96.9	97.8
Not at home (EWNH)	2.4	1.6	5.7	2.4	2.2	2.6	1.9	0.5	0.9	3.4	0.3	0.5	3.8	1.0	0.4	1.5	1.5	2.4	1.9	0.7
Refused (EWR)	0.5	0.1	0.4	0.5	0.2	0.9	0.0	0.0	0.2	0.2	0.0	0.5	0.0	0.4	0.3	0.0	0.7	0.2	0.3	0.0
Incapacitated (EWI)	0.3	0.3	0.4	0.3	0.1	0.5	0.2	0.3	0.3	0.5	0.0	0.5	0.2	0.3	0.4	0.3	0.8	0.0	0.3	0.9
Other (EWO)	0.5	0.6	0.6	0.6	0.1	1.2	0.8	0.7	0.3	0.6	0.6	0.2	0.0	1.1	0.9	0.0	0.5	0.4	0.5	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of eligible women	4,096	5,434	685	1,465	812	653	626	614	588	638	655	567	553	696	704	602	596	541	9,530	679
Eligible women response rate (EWRR)[2]	96.3	97.4	92.8	96.2	97.3	94.8	97.1	98.5	98.3	95.3	99.1	98.2	96.0	97.1	98.0	98.2	96.5	97.0	96.9	97.8
Overall women response rate (OWRR)[3]	94.6	96.4	89.8	94.3	95.2	93.3	97.1	97.7	98.1	93.0	98.8	97.6	94.0	95.8	97.1	96.8	95.6	95.9	95.7	97.3

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed.
[3] The overall women response rate (OWRR) is calculated as:

$$OWRR = HRR * EWRR/100$$

ESTIMATES OF SAMPLING ERRORS

Appendix B

The estimates from a sample survey are affected by two types of errors: non-sampling errors and sampling errors. Non-sampling errors are due to mistakes made in collecting and processing data, such as failing to locate and interview the correct household, misunderstanding questions (on the part of either the interviewer or the respondent), and entering data incorrectly. Although efforts were made to minimise this type of error during implementation of the 2024–25 Uganda Malaria Indicator Survey (UMIS), non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected for the 2024–25 UMIS is one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would have yielded results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability among all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (for example, mean or percentage), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95% of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, straightforward formulas could have been used for calculating sampling errors. However, the 2024–25 UMIS sample is the result of a multi-stage stratified design; consequently, it was necessary to use more complex formulas. The computer software used to calculate sampling errors for the 2024–25 UMIS was a SAS program. This program used the Taylor linearisation method of variance estimation for survey estimates that were means, proportions, or ratios.

The Taylor linearisation method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance, r, is computed using the following formula, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum that varies from 1 to H,
m_h is the total number of clusters selected in the hth stratum,
y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,
x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

In addition to the standard error, the design effect (DEFT) is calculated for each estimate. DEFT is defined as the ratio between the standard error from using the given sample design and the standard error that would have resulted from using a simple random sample. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates an increased sampling error due to the use of a more complex and less statistically efficient design. The relative standard error and confidence limits for the estimates were also calculated.

Sampling errors for the 2024–25 UMIS were calculated for selected variables considered to be of primary interest. The results are presented in this appendix for Uganda, for urban and rural areas separately, for each of the 15 subregions, for three different U.S. President's Malaria Initiative (PMI) programme areas, and for the refugee settlements (which were not counted in the country's total). All variables, along with their type of estimate (that is, mean, proportion, or rate) and the base population for each variable, are given in **Table B.1**. **Table B.2**–**Table B.23** present, for each variable, the value of the estimate, its standard error, the numbers of unweighted and weighted cases, the DEFT, the relative standard error, and the 95% confidence limits (estimate ± two standard errors). The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1).

The confidence interval, for example as calculated for *child has malaria (based on microscopy)* for children under age 5, can be interpreted as follows: The overall proportion from the national sample is 0.125, and its standard error is 0.008. Therefore, to obtain the 95% confidence limits, one adds and subtracts twice the standard error to the sample estimate (that is, $0.125 \pm 2 \times 0.008$). The probability is high (95%) that the *true* average proportion of children under age 5 who have malaria is between 0.109 and 0.141.

For the total sample, the value of the DEFT, averaging over all variables, is 1.415. This means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.415 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Uganda MIS 2024–25

Variable	Estimate	Base population	Table number
		HOUSEHOLDS	
Ownership of at least one mosquito net	Proportion	Households	3.1
Average number of mosquito nets per household	Mean	Households	3.1
Ownership of at least one ITN	Proportion	Households	3.1
Average number of ITNs per household	Mean	Households	3.1
Ownership of at least one ITN for every two persons	Proportion	Households (with at least one person who stayed in the household the night before the survey)	3.1
		WOMEN	
Urban residence	Proportion	Women age 15–49	2.11
No education	Proportion	All women age 15–49	2.12
Secondary education or higher	Proportion	All women age 15–49	2.12
Literacy	Proportion	All women age 15–49	2.13
4+ ANC visits	Proportion	Last birth of women age 15–49 with live births past 2 years	3.10
8+ ANC visits	Proportion	Last birth of women age 15–49 with live births past 2 years	3.10
Received 1+ doses of SP/Fansidar	Proportion	Last birth of women age 15–49 with live births past 2 years	3.11
Received 2+ doses of SP/Fansidar	Proportion	Last birth of women age 15–49 with live births past 2 years	3.11
Received 3+ doses of SP/Fansidar	Proportion	Last birth of women age 15–49 with live births past 2 years	3.11
		CHILDREN	
Child slept under any mosquito net last night	Proportion	Children under age 5 in households	3.6
Child slept under an ITN last night	Proportion	Children under age 5 in households	3.6
Child slept under an ITN last night in households with at least one ITN	Proportion	Children under age 5 in households with at least one ITN	3.6
Child had fever in past 2 weeks	Proportion	Child under age 5 in women's birth history	4.1
Child had blood taken from finger/heel	Proportion	Child under age 5 in women's birth history who had fever in the past 2 weeks	4.1
Child sought care/treatment from a health facility	Proportion	Child under age 5 with fever in past 2 weeks	4.1
Child took ACT	Proportion	Child under age 5 with fever in past 2 weeks who received any antimalarial drugs	4.3
Child has malaria (based on rapid test)	Proportion	Children age 6–59 months tested (rapid test) for malaria	4.6
Child has malaria (based on microscopy)	Proportion	Children age 6–59 months tested (microscopy) for malaria	4.6
		PREGNANT WOMEN	
Pregnant women slept under any mosquito net last night	Proportion	Pregnant women age 15–49 in households	3.7
Pregnant women slept under an ITN last night	Proportion	Pregnant women age 15–49 in households	3.7
Pregnant women slept under an ITN last night in households with at least one ITN	Proportion	Pregnant women age 15–49 in households with at least one ITN	3.7

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.2 Sampling errors: Total sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.869	0.006	9,458	9,458	1.660	0.007	0.858	0.881
Average number of mosquito nets per household	2.324	0.030	9,458	9,458	1.815	0.013	2.263	2.385
Ownership of at least one ITN	0.836	0.007	9,458	9,458	1.763	0.008	0.823	0.849
Average number of ITNs per household	2.212	0.030	9,458	9,458	1.810	0.014	2.152	2.273
Ownership of at least one ITN for every two persons	0.557	0.008	9,451	9,450	1.636	0.015	0.540	0.573
WOMEN								
Urban residence	0.414	0.006	9,238	9,238	1.206	0.015	0.402	0.427
No education	0.091	0.004	9,238	9,238	1.482	0.049	0.082	0.100
Secondary education or higher	0.409	0.011	9,238	9,238	2.061	0.026	0.388	0.430
Literacy	0.766	0.008	9,238	9,238	1.735	0.010	0.750	0.781
4+ ANC visits	0.778	0.009	2,634	2,574	1.139	0.012	0.760	0.797
8+ ANC visits	0.073	0.005	2,634	2,574	1.068	0.074	0.062	0.084
Received 1+ doses of SP/Fansidar	0.954	0.005	2,634	2,574	1.306	0.006	0.943	0.965
Received 2+ doses of SP/Fansidar	0.871	0.008	2,634	2,574	1.191	0.009	0.855	0.886
Received 3+ doses of SP/Fansidar	0.732	0.011	2,634	2,574	1.285	0.015	0.710	0.754
CHILDREN								
Child slept under any mosquito net last night	0.718	0.008	7,540	7,318	1.306	0.012	0.701	0.735
Child slept under an ITN last night	0.686	0.008	7,540	7,318	1.266	0.012	0.669	0.703
Child slept under an ITN last night in household with at least one ITN	0.783	0.008	6,631	6,408	1.245	0.010	0.768	0.799
Child had fever in past 2 weeks	0.309	0.008	6,352	6,182	1.299	0.027	0.292	0.326
Child had blood taken from finger/heel	0.572	0.016	2,080	1,911	1.313	0.028	0.539	0.604
Child sought care/treatment from a health facility	0.840	0.010	2,080	1,911	1.052	0.011	0.821	0.859
Child took ACT	0.869	0.011	1,366	1,256	1.108	0.013	0.846	0.892
Child has malaria (based on rapid test)	0.211	0.011	6,497	6,302	1.809	0.051	0.189	0.233
Child has malaria (based on microscopy)	0.125	0.008	6,507	6,309	1.766	0.065	0.109	0.141
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.768	0.017	761	695	1.052	0.022	0.734	0.802
Pregnant women slept under an ITN last night	0.720	0.020	761	695	1.191	0.028	0.679	0.761
Pregnant women slept under an ITN last night in household with at least one ITN	0.837	0.018	661	598	1.229	0.022	0.801	0.873

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.3 Sampling errors: Urban sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.875	0.009	3,917	3,792	1.709	0.010	0.857	0.893
Average number of mosquito nets per household	2.406	0.048	3,917	3,792	1.794	0.020	2.309	2.503
Ownership of at least one ITN	0.811	0.011	3,917	3,792	1.772	0.014	0.789	0.833
Average number of ITNs per household	2.195	0.047	3,917	3,792	1.743	0.022	2.100	2.290
Ownership of at least one ITN for every two persons	0.580	0.012	3,913	3,787	1.518	0.021	0.556	0.603
WOMEN								
Urban residence	1.000	0.000	3,946	3,827	na	0.000	1.000	1.000
No education	0.058	0.006	3,946	3,827	1.497	0.096	0.047	0.069
Secondary education or higher	0.548	0.015	3,946	3,827	1.939	0.028	0.517	0.579
Literacy	0.850	0.010	3,946	3,827	1.675	0.011	0.831	0.869
4+ ANC visits	0.802	0.015	983	939	1.172	0.019	0.773	0.832
8+ ANC visits	0.083	0.010	983	939	1.138	0.121	0.063	0.103
Received 1+ doses of SP/Fansidar	0.963	0.007	983	939	1.116	0.007	0.950	0.977
Received 2+ doses of SP/Fansidar	0.878	0.013	983	939	1.210	0.014	0.852	0.903
Received 3+ doses of SP/Fansidar	0.748	0.018	983	939	1.297	0.024	0.712	0.784
CHILDREN								
Child slept under any mosquito net last night	0.741	0.012	2,798	2,665	1.150	0.016	0.718	0.765
Child slept under an ITN last night	0.671	0.012	2,798	2,665	1.098	0.018	0.647	0.695
Child slept under an ITN last night in household with at least one ITN	0.790	0.009	2,385	2,265	0.917	0.011	0.772	0.808
Child had fever in past 2 weeks	0.260	0.013	2,394	2,278	1.274	0.049	0.235	0.286
Child had blood taken from finger/heel	0.588	0.028	658	593	1.318	0.048	0.531	0.644
Child sought care/treatment from a health facility	0.857	0.016	658	593	1.048	0.018	0.825	0.888
Child took ACT	0.835	0.022	418	375	1.124	0.027	0.790	0.880
Child has malaria (based on rapid test)	0.125	0.015	2,358	2,261	1.908	0.120	0.095	0.155
Child has malaria (based on microscopy)	0.067	0.010	2,364	2,263	1.719	0.142	0.048	0.086
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.798	0.027	293	253	1.060	0.034	0.744	0.851
Pregnant women slept under an ITN last night	0.705	0.032	293	253	1.130	0.046	0.640	0.769
Pregnant women slept under an ITN last night in household with at least one ITN	0.844	0.033	240	211	1.361	0.039	0.779	0.910

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.4 Sampling errors: Rural sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.865	0.007	5,541	5,666	1.627	0.009	0.850	0.880
Average number of mosquito nets per household	2.269	0.039	5,541	5,666	1.831	0.017	2.191	2.348
Ownership of at least one ITN	0.853	0.008	5,541	5,666	1.763	0.010	0.836	0.869
Average number of ITNs per household	2.224	0.040	5,541	5,666	1.860	0.018	2.145	2.303
Ownership of at least one ITN for every two persons	0.541	0.011	5,538	5,663	1.705	0.021	0.519	0.564
WOMEN								
Urban residence	0.000	0.000	5,292	5,411	na	na	0.000	0.000
No education	0.115	0.006	5,292	5,411	1.470	0.056	0.102	0.128
Secondary education or higher	0.311	0.014	5,292	5,411	2.203	0.045	0.283	0.339
Literacy	0.706	0.011	5,292	5,411	1.757	0.016	0.684	0.728
4+ ANC visits	0.765	0.012	1,651	1,635	1.121	0.015	0.741	0.788
8+ ANC visits	0.068	0.006	1,651	1,635	1.026	0.094	0.055	0.080
Received 1+ doses of SP/Fansidar	0.948	0.007	1,651	1,635	1.374	0.008	0.933	0.963
Received 2+ doses of SP/Fansidar	0.867	0.010	1,651	1,635	1.179	0.011	0.847	0.887
Received 3+ doses of SP/Fansidar	0.723	0.014	1,651	1,635	1.277	0.019	0.694	0.751
CHILDREN								
Child slept under any mosquito net last night	0.705	0.011	4,742	4,653	1.369	0.016	0.682	0.728
Child slept under an ITN last night	0.695	0.011	4,742	4,653	1.351	0.016	0.672	0.717
Child slept under an ITN last night in household with at least one ITN	0.780	0.011	4,246	4,144	1.381	0.014	0.759	0.801
Child had fever in past 2 weeks	0.338	0.011	3,958	3,904	1.326	0.033	0.315	0.360
Child had blood taken from finger/heel	0.564	0.020	1,422	1,318	1.309	0.035	0.525	0.604
Child sought care/treatment from a health facility	0.833	0.012	1,422	1,318	1.052	0.014	0.809	0.856
Child took ACT	0.884	0.013	948	880	1.098	0.015	0.858	0.909
Child has malaria (based on rapid test)	0.259	0.014	4,139	4,041	1.793	0.056	0.230	0.288
Child has malaria (based on microscopy)	0.157	0.011	4,143	4,046	1.765	0.072	0.135	0.180
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.751	0.022	468	442	1.035	0.029	0.708	0.795
Pregnant women slept under an ITN last night	0.729	0.026	468	442	1.228	0.036	0.676	0.782
Pregnant women slept under an ITN last night in household with at least one ITN	0.833	0.021	421	387	1.155	0.026	0.790	0.876

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.5 Sampling errors: Kampala sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.849	0.019	656	273	1.325	0.022	0.812	0.886
Average number of mosquito nets per household	2.168	0.097	656	273	1.507	0.045	1.974	2.361
Ownership of at least one ITN	0.688	0.028	656	273	1.535	0.040	0.632	0.743
Average number of ITNs per household	1.758	0.112	656	273	1.697	0.064	1.533	1.982
Ownership of at least one ITN for every two persons	0.532	0.028	654	273	1.435	0.053	0.476	0.588
WOMEN								
Urban residence	1.000	0.000	636	279	na	0.000	1.000	1.000
No education	0.046	0.010	636	279	1.226	0.223	0.025	0.066
Secondary education or higher	0.701	0.016	636	279	0.874	0.023	0.670	0.733
Literacy	0.904	0.015	636	279	1.246	0.016	0.875	0.933
4+ ANC visits	0.756	0.030	135	59	0.812	0.040	0.695	0.816
8+ ANC visits	0.089	0.030	135	59	1.211	0.335	0.029	0.149
Received 1+ doses of SP/Fansidar	0.889	0.037	135	59	1.349	0.041	0.815	0.962
Received 2+ doses of SP/Fansidar	0.807	0.046	135	59	1.350	0.057	0.715	0.900
Received 3+ doses of SP/Fansidar	0.689	0.042	135	59	1.052	0.061	0.605	0.773
CHILDREN								
Child slept under any mosquito net last night	0.751	0.032	334	139	1.129	0.043	0.687	0.816
Child slept under an ITN last night	0.560	0.036	334	139	1.115	0.065	0.487	0.632
Child slept under an ITN last night in household with at least one ITN	0.776	0.034	241	100	1.069	0.044	0.708	0.844
Child had fever in past 2 weeks	0.167	0.025	330	145	1.142	0.147	0.118	0.216
Child had blood taken from finger/heel	0.582	0.082	55	24	1.184	0.141	0.417	0.746
Child sought care/treatment from a health facility	0.873	0.084	55	24	1.653	0.096	0.705	1.000
Child took ACT	0.700	0.102	20	9	0.898	0.146	0.496	0.904
Child has malaria (based on rapid test)	0.009	0.006	234	98	0.984	0.689	0.000	0.020
Child has malaria (based on microscopy)	0.004	0.004	236	98	0.938	0.938	0.000	0.012
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.886	0.049	44	18	1.033	0.056	0.787	0.985
Pregnant women slept under an ITN last night	0.545	0.074	44	18	0.984	0.135	0.398	0.693
Pregnant women slept under an ITN last night in household with at least one ITN	0.800	0.076	30	13	1.025	0.095	0.648	0.952

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.6 Sampling errors: South Buganda sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.847	0.017	769	1,706	1.299	0.020	0.813	0.880
Average number of mosquito nets per household	2.344	0.077	769	1,706	1.243	0.033	2.189	2.499
Ownership of at least one ITN	0.759	0.022	769	1,706	1.407	0.029	0.716	0.803
Average number of ITNs per household	2.033	0.074	769	1,706	1.195	0.036	1.885	2.180
Ownership of at least one ITN for every two persons	0.559	0.020	767	1,702	1.096	0.035	0.519	0.598
WOMEN								
Urban residence	0.628	0.017	790	1,748	0.975	0.027	0.595	0.662
No education	0.048	0.012	790	1,748	1.624	0.257	0.023	0.073
Secondary education or higher	0.653	0.031	790	1,748	1.839	0.048	0.591	0.716
Literacy	0.909	0.015	790	1,748	1.478	0.017	0.879	0.939
4+ ANC visits	0.788	0.031	175	390	1.002	0.039	0.726	0.850
8+ ANC visits	0.029	0.015	175	390	1.164	0.515	0.000	0.058
Received 1+ doses of SP/Fansidar	0.927	0.020	175	390	1.019	0.022	0.887	0.968
Received 2+ doses of SP/Fansidar	0.830	0.028	175	390	0.977	0.034	0.774	0.886
Received 3+ doses of SP/Fansidar	0.703	0.034	175	390	0.981	0.048	0.635	0.771
CHILDREN								
Child slept under any mosquito net last night	0.715	0.029	488	1,089	1.195	0.041	0.656	0.774
Child slept under an ITN last night	0.616	0.030	488	1,089	1.098	0.048	0.557	0.676
Child slept under an ITN last night in household with at least one ITN	0.771	0.027	390	871	1.099	0.035	0.717	0.824
Child had fever in past 2 weeks	0.187	0.024	437	975	1.140	0.129	0.139	0.236
Child had blood taken from finger/heel	0.646	0.065	84	183	1.047	0.100	0.517	0.775
Child sought care/treatment from a health facility	0.890	0.032	84	183	0.926	0.036	0.826	0.953
Child took ACT	0.666	0.063	51	110	0.816	0.095	0.540	0.793
Child has malaria (based on rapid test)	0.039	0.014	407	909	1.293	0.354	0.011	0.066
Child has malaria (based on microscopy)	0.023	0.009	406	907	1.063	0.379	0.006	0.040
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.739	0.058	39	88	0.825	0.078	0.624	0.854
Pregnant women slept under an ITN last night	0.638	0.072	39	88	0.944	0.113	0.493	0.782
Pregnant women slept under an ITN last night in household with at least one ITN	0.832	0.075	30	67	1.082	0.090	0.682	0.983

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.7 Sampling errors: North Buganda sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.851	0.018	726	1,162	1.341	0.021	0.816	0.887
Average number of mosquito nets per household	2.320	0.109	726	1,162	1.761	0.047	2.102	2.538
Ownership of at least one ITN	0.820	0.020	726	1,162	1.374	0.024	0.781	0.859
Average number of ITNs per household	2.213	0.109	726	1,162	1.759	0.049	1.995	2.430
Ownership of at least one ITN for every two persons	0.585	0.027	726	1,162	1.477	0.046	0.531	0.639
WOMEN								
Urban residence	0.425	0.022	619	1,024	1.090	0.051	0.381	0.468
No education	0.044	0.011	619	1,024	1.349	0.253	0.022	0.066
Secondary education or higher	0.481	0.041	619	1,024	2.025	0.085	0.399	0.562
Literacy	0.880	0.019	619	1,024	1.460	0.022	0.842	0.918
4+ ANC visits	0.746	0.028	178	295	0.844	0.037	0.691	0.802
8+ ANC visits	0.054	0.017	178	295	0.996	0.312	0.021	0.088
Received 1+ doses of SP/Fansidar	0.918	0.027	178	295	1.292	0.029	0.865	0.972
Received 2+ doses of SP/Fansidar	0.829	0.030	178	295	1.059	0.036	0.769	0.889
Received 3+ doses of SP/Fansidar	0.715	0.038	178	295	1.131	0.054	0.638	0.792
CHILDREN								
Child slept under any mosquito net last night	0.690	0.031	502	807	1.217	0.044	0.629	0.752
Child slept under an ITN last night	0.649	0.028	502	807	1.114	0.044	0.592	0.706
Child slept under an ITN last night in household with at least one ITN	0.754	0.030	434	694	1.209	0.039	0.695	0.814
Child had fever in past 2 weeks	0.295	0.028	410	682	1.147	0.097	0.238	0.352
Child had blood taken from finger/heel	0.512	0.063	121	201	1.299	0.123	0.386	0.638
Child sought care/treatment from a health facility	0.843	0.036	121	201	0.933	0.042	0.772	0.915
Child took ACT	0.813	0.053	74	123	1.088	0.065	0.708	0.918
Child has malaria (based on rapid test)	0.199	0.032	425	684	1.458	0.162	0.134	0.263
Child has malaria (based on microscopy)	0.114	0.020	425	684	1.271	0.180	0.073	0.155
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.718	0.066	40	65	0.878	0.092	0.585	0.851
Pregnant women slept under an ITN last night	0.665	0.104	40	65	1.328	0.156	0.458	0.873
Pregnant women slept under an ITN last night in household with at least one ITN	0.836	0.099	32	51	1.279	0.119	0.637	1.000

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.8 Sampling errors: Busoga sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.829	0.017	686	822	1.201	0.021	0.795	0.864
Average number of mosquito nets per household	2.058	0.082	686	822	1.390	0.040	1.895	2.221
Ownership of at least one ITN	0.821	0.018	686	822	1.198	0.021	0.786	0.856
Average number of ITNs per household	2.033	0.080	686	822	1.355	0.039	1.873	2.192
Ownership of at least one ITN for every two persons	0.525	0.026	685	821	1.355	0.049	0.473	0.577
WOMEN								
Urban residence	0.335	0.015	608	728	0.771	0.044	0.306	0.365
No education	0.100	0.014	608	728	1.189	0.145	0.071	0.129
Secondary education or higher	0.380	0.040	608	728	2.028	0.105	0.300	0.460
Literacy	0.690	0.030	608	728	1.585	0.043	0.630	0.749
4+ ANC visits	0.827	0.031	195	234	1.148	0.038	0.764	0.889
8+ ANC visits	0.062	0.015	195	234	0.894	0.249	0.031	0.093
Received 1+ doses of SP/Fansidar	0.978	0.013	195	234	1.213	0.013	0.952	1.000
Received 2+ doses of SP/Fansidar	0.897	0.022	195	234	1.029	0.025	0.852	0.942
Received 3+ doses of SP/Fansidar	0.701	0.030	195	234	0.917	0.043	0.641	0.761
CHILDREN								
Child slept under any mosquito net last night	0.719	0.026	564	679	1.107	0.036	0.667	0.772
Child slept under an ITN last night	0.713	0.026	564	679	1.084	0.036	0.661	0.764
Child slept under an ITN last night in household with at least one ITN	0.838	0.019	478	577	1.033	0.023	0.799	0.877
Child had fever in past 2 weeks	0.401	0.036	455	550	1.428	0.090	0.329	0.473
Child had blood taken from finger/heel	0.418	0.053	183	221	1.340	0.126	0.313	0.523
Child sought care/treatment from a health facility	0.939	0.019	183	221	0.998	0.020	0.901	0.976
Child took ACT	0.948	0.021	113	135	0.985	0.022	0.906	0.989
Child has malaria (based on rapid test)	0.295	0.051	472	569	2.192	0.172	0.194	0.397
Child has malaria (based on microscopy)	0.209	0.047	475	573	2.304	0.223	0.115	0.302
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.734	0.067	49	61	1.089	0.092	0.600	0.869
Pregnant women slept under an ITN last night	0.714	0.067	49	61	1.054	0.094	0.580	0.847
Pregnant women slept under an ITN last night in household with at least one ITN	0.922	0.046	38	47	1.036	0.050	0.830	1.000

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.9 Sampling errors: Bukedi sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.890	0.020	554	464	1.470	0.022	0.851	0.929
Average number of mosquito nets per household	2.486	0.116	554	464	1.676	0.047	2.254	2.717
Ownership of at least one ITN	0.877	0.022	554	464	1.604	0.026	0.832	0.922
Average number of ITNs per household	2.403	0.113	554	464	1.668	0.047	2.178	2.629
Ownership of at least one ITN for every two persons	0.490	0.028	554	464	1.335	0.058	0.433	0.547
WOMEN								
Urban residence	0.305	0.022	605	503	1.156	0.071	0.262	0.349
No education	0.041	0.008	605	503	1.013	0.199	0.025	0.057
Secondary education or higher	0.317	0.031	605	503	1.643	0.098	0.254	0.379
Literacy	0.776	0.030	605	503	1.780	0.039	0.715	0.836
4+ ANC visits	0.747	0.035	207	172	1.146	0.047	0.677	0.816
8+ ANC visits	0.063	0.018	207	172	1.047	0.280	0.028	0.099
Received 1+ doses of SP/Fansidar	0.981	0.010	207	172	1.109	0.011	0.961	1.000
Received 2+ doses of SP/Fansidar	0.903	0.020	207	172	0.966	0.022	0.863	0.943
Received 3+ doses of SP/Fansidar	0.725	0.037	207	172	1.189	0.051	0.651	0.799
CHILDREN								
Child slept under any mosquito net last night	0.706	0.032	570	477	1.364	0.045	0.643	0.770
Child slept under an ITN last night	0.680	0.036	570	477	1.480	0.052	0.608	0.751
Child slept under an ITN last night in household with at least one ITN	0.748	0.030	517	434	1.239	0.039	0.689	0.807
Child had fever in past 2 weeks	0.433	0.017	486	404	0.704	0.040	0.399	0.468
Child had blood taken from finger/heel	0.505	0.053	210	175	1.420	0.104	0.400	0.611
Child sought care/treatment from a health facility	0.838	0.039	210	175	1.400	0.047	0.759	0.916
Child took ACT	0.915	0.021	127	106	0.864	0.023	0.872	0.957
Child has malaria (based on rapid test)	0.162	0.055	518	434	2.926	0.340	0.052	0.272
Child has malaria (based on microscopy)	0.119	0.042	518	434	2.691	0.353	0.035	0.203
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.765	0.066	68	56	1.267	0.086	0.634	0.896
Pregnant women slept under an ITN last night	0.737	0.069	68	56	1.283	0.093	0.600	0.875
Pregnant women slept under an ITN last night in household with at least one ITN	0.793	0.061	63	53	1.183	0.077	0.670	0.915

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.10 Sampling errors: Elgon sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.893	0.017	584	392	1.321	0.019	0.859	0.927
Average number of mosquito nets per household	2.666	0.121	584	392	1.719	0.045	2.424	2.907
Ownership of at least one ITN	0.889	0.017	584	392	1.271	0.019	0.856	0.922
Average number of ITNs per household	2.655	0.120	584	392	1.707	0.045	2.415	2.895
Ownership of at least one ITN for every two persons	0.600	0.026	583	391	1.281	0.043	0.548	0.652
WOMEN								
Urban residence	0.356	0.048	578	386	2.389	0.134	0.260	0.452
No education	0.027	0.008	578	386	1.134	0.281	0.012	0.043
Secondary education or higher	0.465	0.034	578	386	1.646	0.074	0.397	0.534
Literacy	0.773	0.026	578	386	1.480	0.033	0.721	0.824
4+ ANC visits	0.753	0.028	176	116	0.873	0.038	0.696	0.810
8+ ANC visits	0.125	0.031	176	116	1.256	0.252	0.062	0.188
Received 1+ doses of SP/Fansidar	0.964	0.015	176	116	1.085	0.016	0.934	0.995
Received 2+ doses of SP/Fansidar	0.874	0.021	176	116	0.828	0.024	0.833	0.916
Received 3+ doses of SP/Fansidar	0.751	0.036	176	116	1.098	0.048	0.679	0.823
CHILDREN								
Child slept under any mosquito net last night	0.735	0.032	523	349	1.309	0.043	0.672	0.799
Child slept under an ITN last night	0.731	0.032	523	349	1.325	0.044	0.667	0.796
Child slept under an ITN last night in household with at least one ITN	0.803	0.034	477	318	1.489	0.043	0.734	0.871
Child had fever in past 2 weeks	0.292	0.032	412	273	1.358	0.110	0.227	0.356
Child had blood taken from finger/heel	0.540	0.076	121	79	1.542	0.140	0.389	0.692
Child sought care/treatment from a health facility	0.892	0.033	121	79	1.086	0.037	0.826	0.958
Child took ACT	0.928	0.024	85	55	0.824	0.025	0.881	0.975
Child has malaria (based on rapid test)	0.128	0.042	476	318	2.372	0.327	0.044	0.212
Child has malaria (based on microscopy)	0.061	0.022	477	318	1.783	0.354	0.018	0.105
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.759	0.053	58	39	0.940	0.070	0.653	0.865
Pregnant women slept under an ITN last night	0.722	0.055	58	39	0.937	0.077	0.612	0.833
Pregnant women slept under an ITN last night in household with at least one ITN	0.802	0.061	52	35	1.084	0.076	0.681	0.923

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.11 Sampling errors: Teso sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.954	0.013	563	433	1.495	0.014	0.928	0.981
Average number of mosquito nets per household	2.680	0.121	563	433	1.807	0.045	2.438	2.923
Ownership of at least one ITN	0.953	0.013	563	433	1.475	0.014	0.926	0.979
Average number of ITNs per household	2.670	0.121	563	433	1.794	0.045	2.429	2.912
Ownership of at least one ITN for every two persons	0.592	0.036	563	433	1.735	0.061	0.520	0.664
WOMEN								
Urban residence	0.157	0.017	608	481	1.133	0.107	0.123	0.190
No education	0.050	0.008	608	481	0.911	0.161	0.034	0.067
Secondary education or higher	0.301	0.030	608	481	1.606	0.099	0.241	0.361
Literacy	0.676	0.033	608	481	1.716	0.048	0.610	0.741
4+ ANC visits	0.635	0.036	205	164	1.082	0.057	0.562	0.708
8+ ANC visits	0.034	0.009	205	164	0.745	0.277	0.015	0.053
Received 1+ doses of SP/Fansidar	0.975	0.015	205	164	1.371	0.015	0.945	1.000
Received 2+ doses of SP/Fansidar	0.906	0.029	205	164	1.421	0.032	0.847	0.964
Received 3+ doses of SP/Fansidar	0.795	0.046	205	164	1.626	0.058	0.703	0.888
CHILDREN								
Child slept under any mosquito net last night	0.779	0.023	544	421	1.125	0.030	0.733	0.825
Child slept under an ITN last night	0.775	0.024	544	421	1.180	0.031	0.727	0.823
Child slept under an ITN last night in household with at least one ITN	0.817	0.025	516	400	1.327	0.031	0.767	0.868
Child had fever in past 2 weeks	0.560	0.023	467	373	0.929	0.042	0.514	0.607
Child had blood taken from finger/heel	0.574	0.044	263	209	1.373	0.077	0.485	0.662
Child sought care/treatment from a health facility	0.810	0.025	263	209	0.953	0.031	0.760	0.860
Child took ACT	0.871	0.024	180	143	0.883	0.028	0.822	0.919
Child has malaria (based on rapid test)	0.441	0.024	476	368	0.940	0.054	0.394	0.488
Child has malaria (based on microscopy)	0.229	0.015	476	368	0.775	0.067	0.198	0.260
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.808	0.032	75	58	0.716	0.040	0.744	0.873
Pregnant women slept under an ITN last night	0.799	0.034	75	58	0.733	0.042	0.732	0.866
Pregnant women slept under an ITN last night in household with at least one ITN	0.841	0.033	71	55	0.761	0.039	0.776	0.907

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.12 Sampling errors: Lango sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.923	0.016	633	539	1.551	0.018	0.890	0.956
Average number of mosquito nets per household	2.278	0.102	633	539	1.833	0.045	2.073	2.482
Ownership of at least one ITN	0.923	0.016	633	539	1.551	0.018	0.890	0.956
Average number of ITNs per household	2.276	0.103	633	539	1.834	0.045	2.071	2.481
Ownership of at least one ITN for every two persons	0.578	0.034	633	539	1.728	0.059	0.510	0.646
WOMEN								
Urban residence	0.355	0.016	649	538	0.876	0.046	0.322	0.388
No education	0.061	0.011	649	538	1.132	0.174	0.040	0.083
Secondary education or higher	0.194	0.028	649	538	1.797	0.144	0.138	0.250
Literacy	0.671	0.032	649	538	1.740	0.048	0.607	0.736
4+ ANC visits	0.857	0.036	161	137	1.289	0.042	0.785	0.928
8+ ANC visits	0.142	0.027	161	137	0.987	0.191	0.088	0.197
Received 1+ doses of SP/Fansidar	0.964	0.012	161	137	0.838	0.013	0.939	0.989
Received 2+ doses of SP/Fansidar	0.866	0.028	161	137	1.025	0.032	0.811	0.921
Received 3+ doses of SP/Fansidar	0.709	0.041	161	137	1.146	0.058	0.626	0.791
CHILDREN								
Child slept under any mosquito net last night	0.845	0.016	475	405	0.843	0.019	0.813	0.878
Child slept under an ITN last night	0.845	0.016	475	405	0.843	0.019	0.813	0.878
Child slept under an ITN last night in household with at least one ITN	0.886	0.014	453	387	0.864	0.016	0.857	0.915
Child had fever in past 2 weeks	0.626	0.032	395	333	1.266	0.052	0.562	0.691
Child had blood taken from finger/heel	0.659	0.036	244	209	1.100	0.055	0.587	0.731
Child sought care/treatment from a health facility	0.816	0.029	244	209	1.100	0.036	0.757	0.874
Child took ACT	0.919	0.021	197	169	1.111	0.023	0.876	0.961
Child has malaria (based on rapid test)	0.596	0.038	430	366	1.489	0.063	0.521	0.671
Child has malaria (based on microscopy)	0.316	0.039	432	368	1.581	0.123	0.238	0.393
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.861	0.047	63	53	1.058	0.054	0.768	0.955
Pregnant women slept under an ITN last night	0.861	0.047	63	53	1.058	0.054	0.768	0.955
Pregnant women slept under an ITN last night in household with at least one ITN	0.924	0.032	59	49	0.923	0.035	0.859	0.988

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.13 Sampling errors: Acholi sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.827	0.020	603	402	1.265	0.024	0.788	0.866
Average number of mosquito nets per household	1.791	0.091	603	402	1.681	0.051	1.608	1.974
Ownership of at least one ITN	0.796	0.025	603	402	1.547	0.032	0.746	0.847
Average number of ITNs per household	1.717	0.098	603	402	1.801	0.057	1.521	1.913
Ownership of at least one ITN for every two persons	0.403	0.022	603	402	1.078	0.053	0.360	0.446
WOMEN								
Urban residence	0.355	0.016	557	368	0.802	0.046	0.323	0.388
No education	0.156	0.023	557	368	1.482	0.146	0.111	0.202
Secondary education or higher	0.286	0.033	557	368	1.706	0.115	0.220	0.352
Literacy	0.649	0.040	557	368	1.959	0.061	0.570	0.729
4+ ANC visits	0.905	0.019	154	102	0.823	0.022	0.866	0.944
8+ ANC visits	0.170	0.034	154	102	1.122	0.200	0.102	0.238
Received 1+ doses of SP/Fansidar	0.956	0.015	154	102	0.928	0.016	0.925	0.987
Received 2+ doses of SP/Fansidar	0.860	0.021	154	102	0.764	0.025	0.817	0.903
Received 3+ doses of SP/Fansidar	0.626	0.036	154	102	0.926	0.058	0.554	0.699
CHILDREN								
Child slept under any mosquito net last night	0.684	0.025	469	313	0.964	0.037	0.634	0.735
Child slept under an ITN last night	0.671	0.026	469	313	0.977	0.039	0.619	0.723
Child slept under an ITN last night in household with at least one ITN	0.785	0.018	399	267	0.735	0.023	0.749	0.821
Child had fever in past 2 weeks	0.471	0.030	381	252	1.154	0.064	0.411	0.532
Child had blood taken from finger/heel	0.693	0.042	179	119	1.182	0.061	0.608	0.778
Child sought care/treatment from a health facility	0.745	0.033	179	119	0.963	0.045	0.678	0.812
Child took ACT	0.922	0.029	133	89	1.279	0.032	0.863	0.980
Child has malaria (based on rapid test)	0.465	0.050	401	268	1.750	0.108	0.364	0.565
Child has malaria (based on microscopy)	0.233	0.035	401	268	1.507	0.150	0.163	0.303
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.796	0.065	39	27	1.018	0.081	0.666	0.926
Pregnant women slept under an ITN last night	0.796	0.065	39	27	1.018	0.081	0.666	0.926
Pregnant women slept under an ITN last night in household with at least one ITN	0.860	0.059	36	25	1.009	0.069	0.742	0.978

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.14 Sampling errors: Karamoja sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.783	0.038	567	272	2.182	0.049	0.707	0.858
Average number of mosquito nets per household	1.938	0.189	567	272	2.694	0.097	1.560	2.315
Ownership of at least one ITN	0.776	0.037	567	272	2.129	0.048	0.701	0.850
Average number of ITNs per household	1.899	0.185	567	272	2.698	0.098	1.528	2.270
Ownership of at least one ITN for every two persons	0.383	0.038	567	272	1.840	0.098	0.308	0.458
WOMEN								
Urban residence	0.276	0.016	531	259	0.849	0.060	0.243	0.309
No education	0.645	0.057	531	259	2.747	0.089	0.530	0.760
Secondary education or higher	0.116	0.034	531	259	2.456	0.296	0.047	0.184
Literacy	0.237	0.050	531	259	2.690	0.211	0.137	0.337
4+ ANC visits	0.747	0.050	197	96	1.590	0.066	0.647	0.846
8+ ANC visits	0.096	0.028	197	96	1.322	0.290	0.041	0.152
Received 1+ doses of SP/Fansidar	0.975	0.013	197	96	1.140	0.013	0.949	1.000
Received 2+ doses of SP/Fansidar	0.929	0.019	197	96	1.036	0.020	0.891	0.967
Received 3+ doses of SP/Fansidar	0.817	0.026	197	96	0.946	0.032	0.764	0.869
CHILDREN								
Child slept under any mosquito net last night	0.611	0.039	617	297	1.597	0.064	0.533	0.689
Child slept under an ITN last night	0.607	0.039	617	297	1.593	0.064	0.529	0.685
Child slept under an ITN last night in household with at least one ITN	0.748	0.023	501	241	1.005	0.031	0.702	0.794
Child had fever in past 2 weeks	0.380	0.039	537	263	1.664	0.103	0.302	0.459
Child had blood taken from finger/heel	0.813	0.036	204	100	1.245	0.044	0.741	0.885
Child sought care/treatment from a health facility	0.921	0.018	204	100	0.928	0.020	0.885	0.958
Child took ACT	0.676	0.076	108	53	1.524	0.113	0.524	0.829
Child has malaria (based on rapid test)	0.398	0.068	538	259	2.857	0.172	0.261	0.535
Child has malaria (based on microscopy)	0.262	0.053	537	258	2.537	0.201	0.157	0.368
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.693	0.054	88	42	1.096	0.078	0.585	0.802
Pregnant women slept under an ITN last night	0.682	0.057	88	42	1.143	0.084	0.568	0.796
Pregnant women slept under an ITN last night in household with at least one ITN	0.789	0.046	76	37	0.979	0.059	0.696	0.882

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.15 Sampling errors: West Nile sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.917	0.015	633	570	1.406	0.017	0.886	0.948
Average number of mosquito nets per household	2.407	0.124	633	570	1.935	0.051	2.160	2.654
Ownership of at least one ITN	0.916	0.016	633	570	1.409	0.017	0.885	0.947
Average number of ITNs per household	2.386	0.121	633	570	1.899	0.051	2.145	2.627
Ownership of at least one ITN for every two persons	0.537	0.037	632	569	1.847	0.068	0.463	0.610
WOMEN								
Urban residence	0.312	0.021	676	607	1.186	0.068	0.270	0.355
No education	0.157	0.025	676	607	1.810	0.162	0.106	0.208
Secondary education or higher	0.177	0.030	676	607	2.025	0.169	0.117	0.236
Literacy	0.553	0.041	676	607	2.146	0.075	0.470	0.635
4+ ANC visits	0.881	0.024	183	165	0.989	0.027	0.834	0.928
8+ ANC visits	0.145	0.026	183	165	1.011	0.182	0.092	0.198
Received 1+ doses of SP/Fansidar	0.956	0.017	183	165	1.091	0.017	0.922	0.989
Received 2+ doses of SP/Fansidar	0.917	0.025	183	165	1.215	0.027	0.867	0.966
Received 3+ doses of SP/Fansidar	0.818	0.042	183	165	1.459	0.051	0.734	0.902
CHILDREN								
Child slept under any mosquito net last night	0.735	0.038	548	496	1.574	0.051	0.659	0.810
Child slept under an ITN last night	0.720	0.037	548	496	1.531	0.052	0.646	0.795
Child slept under an ITN last night in household with at least one ITN	0.776	0.032	509	460	1.392	0.042	0.712	0.841
Child had fever in past 2 weeks	0.306	0.034	464	420	1.487	0.110	0.239	0.373
Child had blood taken from finger/heel	0.543	0.050	142	129	1.149	0.091	0.444	0.643
Child sought care/treatment from a health facility	0.754	0.036	142	129	0.987	0.048	0.682	0.827
Child took ACT	0.900	0.041	80	73	1.210	0.045	0.819	0.982
Child has malaria (based on rapid test)	0.166	0.032	457	416	1.729	0.189	0.103	0.230
Child has malaria (based on microscopy)	0.080	0.017	457	416	1.318	0.214	0.046	0.114
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.729	0.075	42	37	1.134	0.103	0.579	0.879
Pregnant women slept under an ITN last night	0.729	0.075	42	37	1.134	0.103	0.579	0.879
Pregnant women slept under an ITN last night in household with at least one ITN	0.790	0.065	39	34	1.038	0.083	0.659	0.920

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.16 Sampling errors: Bunyoro sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.902	0.013	655	580	1.090	0.014	0.877	0.927
Average number of mosquito nets per household	2.577	0.091	655	580	1.397	0.035	2.395	2.760
Ownership of at least one ITN	0.890	0.015	655	580	1.231	0.017	0.860	0.920
Average number of ITNs per household	2.533	0.097	655	580	1.476	0.038	2.339	2.727
Ownership of at least one ITN for every two persons	0.573	0.025	655	580	1.279	0.043	0.523	0.622
WOMEN								
Urban residence	0.310	0.016	690	610	0.930	0.053	0.277	0.343
No education	0.130	0.015	690	610	1.133	0.112	0.101	0.159
Secondary education or higher	0.253	0.033	690	610	1.994	0.131	0.187	0.319
Literacy	0.662	0.040	690	610	2.232	0.061	0.581	0.743
4+ ANC visits	0.666	0.027	241	214	0.899	0.041	0.612	0.721
8+ ANC visits	0.040	0.016	241	214	1.258	0.399	0.008	0.072
Received 1+ doses of SP/Fansidar	0.959	0.014	241	214	1.075	0.014	0.932	0.987
Received 2+ doses of SP/Fansidar	0.884	0.024	241	214	1.146	0.027	0.837	0.932
Received 3+ doses of SP/Fansidar	0.693	0.035	241	214	1.178	0.051	0.622	0.763
CHILDREN								
Child slept under any mosquito net last night	0.735	0.020	632	562	0.916	0.027	0.696	0.774
Child slept under an ITN last night	0.721	0.021	632	562	0.980	0.029	0.679	0.764
Child slept under an ITN last night in household with at least one ITN	0.766	0.020	596	530	0.946	0.026	0.725	0.806
Child had fever in past 2 weeks	0.301	0.031	537	476	1.440	0.104	0.239	0.364
Child had blood taken from finger/heel	0.507	0.051	158	144	1.208	0.100	0.406	0.609
Child sought care/treatment from a health facility	0.784	0.046	158	144	1.288	0.058	0.693	0.876
Child took ACT	0.914	0.029	136	125	1.237	0.032	0.856	0.973
Child has malaria (based on rapid test)	0.263	0.044	538	479	2.044	0.168	0.174	0.351
Child has malaria (based on microscopy)	0.176	0.028	540	481	1.586	0.158	0.120	0.231
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.808	0.052	61	54	0.979	0.065	0.704	0.913
Pregnant women slept under an ITN last night	0.744	0.066	61	54	1.134	0.089	0.612	0.876
Pregnant women slept under an ITN last night in household with at least one ITN	0.824	0.075	55	49	1.341	0.091	0.673	0.974

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.17 Sampling errors: Toro sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.824	0.036	627	668	2.388	0.044	0.751	0.897
Average number of mosquito nets per household	2.064	0.162	627	668	2.543	0.078	1.741	2.387
Ownership of at least one ITN	0.812	0.037	627	668	2.347	0.045	0.739	0.886
Average number of ITNs per household	2.019	0.162	627	668	2.552	0.080	1.695	2.343
Ownership of at least one ITN for every two persons	0.528	0.046	627	668	2.281	0.086	0.437	0.619
WOMEN								
Urban residence	0.379	0.025	591	625	1.256	0.066	0.328	0.429
No education	0.129	0.021	591	625	1.486	0.159	0.088	0.171
Secondary education or higher	0.307	0.030	591	625	1.561	0.097	0.247	0.366
Literacy	0.703	0.034	591	625	1.819	0.049	0.635	0.772
4+ ANC visits	0.824	0.036	163	175	1.195	0.044	0.752	0.895
8+ ANC visits	0.036	0.012	163	175	0.793	0.322	0.013	0.059
Received 1+ doses of SP/Fansidar	0.963	0.014	163	175	0.974	0.015	0.934	0.992
Received 2+ doses of SP/Fansidar	0.922	0.022	163	175	1.033	0.024	0.879	0.966
Received 3+ doses of SP/Fansidar	0.824	0.063	163	175	2.092	0.077	0.697	0.950
CHILDREN								
Child slept under any mosquito net last night	0.609	0.040	490	526	1.467	0.066	0.528	0.690
Child slept under an ITN last night	0.594	0.041	490	526	1.481	0.069	0.511	0.676
Child slept under an ITN last night in household with at least one ITN	0.699	0.036	417	447	1.316	0.051	0.628	0.770
Child had fever in past 2 weeks	0.143	0.040	393	420	2.028	0.276	0.064	0.222
Child had blood taken from finger/heel	0.668	0.054	55	60	0.796	0.081	0.560	0.777
Child sought care/treatment from a health facility	0.833	0.052	55	60	0.906	0.062	0.729	0.937
Child took ACT	0.891	0.077	46	50	1.684	0.087	0.736	1.000
Child has malaria (based on rapid test)	0.139	0.050	431	463	2.524	0.361	0.039	0.240
Child has malaria (based on microscopy)	0.092	0.037	431	463	2.187	0.399	0.019	0.165
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.647	0.095	37	40	1.217	0.148	0.456	0.837
Pregnant women slept under an ITN last night	0.647	0.095	37	40	1.217	0.148	0.456	0.837
Pregnant women slept under an ITN last night in household with at least one ITN	0.701	0.088	34	37	1.106	0.126	0.524	0.878

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.18 Sampling errors: Ankole sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.903	0.020	632	787	1.695	0.022	0.863	0.943
Average number of mosquito nets per household	2.492	0.109	632	787	1.676	0.044	2.274	2.711
Ownership of at least one ITN	0.860	0.030	632	787	2.169	0.035	0.800	0.920
Average number of ITNs per household	2.378	0.118	632	787	1.797	0.050	2.141	2.614
Ownership of at least one ITN for every two persons	0.644	0.036	632	787	1.906	0.056	0.571	0.717
WOMEN								
Urban residence	0.413	0.018	575	724	0.866	0.043	0.378	0.449
No education	0.051	0.013	575	724	1.382	0.248	0.026	0.077
Secondary education or higher	0.497	0.027	575	724	1.305	0.055	0.442	0.551
Literacy	0.912	0.016	575	724	1.349	0.017	0.880	0.944
4+ ANC visits	0.814	0.042	126	158	1.194	0.051	0.731	0.897
8+ ANC visits	0.107	0.024	126	158	0.881	0.228	0.058	0.155
Received 1+ doses of SP/Fansidar	0.967	0.019	126	158	1.185	0.020	0.928	1.000
Received 2+ doses of SP/Fansidar	0.841	0.038	126	158	1.148	0.045	0.766	0.916
Received 3+ doses of SP/Fansidar	0.768	0.048	126	158	1.260	0.062	0.672	0.863
CHILDREN								
Child slept under any mosquito net last night	0.764	0.027	389	486	1.020	0.035	0.711	0.817
Child slept under an ITN last night	0.733	0.030	389	486	1.140	0.042	0.672	0.794
Child slept under an ITN last night in household with at least one ITN	0.810	0.027	350	439	1.047	0.033	0.757	0.864
Child had fever in past 2 weeks	0.100	0.019	300	377	1.036	0.184	0.063	0.137
Child had blood taken from finger/heel	0.604	0.078	30	38	0.859	0.130	0.447	0.760
Child sought care/treatment from a health facility	0.868	0.087	30	38	1.397	0.100	0.695	1.000
Child took ACT	0.819	0.125	10	12	1.000	0.153	0.569	1.000
Child has malaria (based on rapid test)	0.020	0.009	347	434	1.257	0.470	0.001	0.039
Child has malaria (based on microscopy)	0.015	0.007	348	435	1.124	0.494	0.000	0.029
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.907	0.048	31	38	0.921	0.053	0.811	1.000
Pregnant women slept under an ITN last night	0.802	0.086	31	38	1.197	0.108	0.629	0.974
Pregnant women slept under an ITN last night in household with at least one ITN	0.962	0.039	25	32	0.987	0.040	0.885	1.000

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.19 Sampling errors: Kigezi sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.896	0.027	570	389	2.108	0.030	0.842	0.950
Average number of mosquito nets per household	2.485	0.126	570	389	1.947	0.051	2.234	2.737
Ownership of at least one ITN	0.880	0.027	570	389	2.005	0.031	0.825	0.935
Average number of ITNs per household	2.427	0.130	570	389	2.013	0.053	2.168	2.686
Ownership of at least one ITN for every two persons	0.671	0.036	570	389	1.848	0.054	0.598	0.744
WOMEN								
Urban residence	0.268	0.020	525	361	1.044	0.075	0.228	0.309
No education	0.061	0.012	525	361	1.183	0.203	0.036	0.086
Secondary education or higher	0.382	0.052	525	361	2.456	0.137	0.278	0.487
Literacy	0.878	0.025	525	361	1.726	0.028	0.828	0.927
4+ ANC visits	0.783	0.037	138	95	1.050	0.047	0.709	0.857
8+ ANC visits	0.093	0.022	138	95	0.877	0.234	0.049	0.136
Received 1+ doses of SP/Fansidar	0.964	0.018	138	95	1.158	0.019	0.928	1.000
Received 2+ doses of SP/Fansidar	0.823	0.045	138	95	1.368	0.054	0.734	0.913
Received 3+ doses of SP/Fansidar	0.654	0.048	138	95	1.179	0.073	0.558	0.750
CHILDREN								
Child slept under any mosquito net last night	0.731	0.032	395	270	1.231	0.044	0.666	0.795
Child slept under an ITN last night	0.715	0.034	395	270	1.280	0.048	0.647	0.783
Child slept under an ITN last night in household with at least one ITN	0.798	0.020	353	242	0.813	0.025	0.758	0.837
Child had fever in past 2 weeks	0.088	0.016	348	239	0.986	0.184	0.056	0.121
Child had blood taken from finger/heel	0.330	0.082	31	21	0.967	0.247	0.167	0.493
Child sought care/treatment from a health facility	0.709	0.086	31	21	1.015	0.122	0.536	0.881
Child took ACT	1.000	0.000	6	4	na	0.000	1.000	1.000
Child has malaria (based on rapid test)	0.009	0.007	347	237	0.995	0.722	0.000	0.022
Child has malaria (based on microscopy)	0.006	0.006	348	238	1.024	0.999	0.000	0.018
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.782	0.065	27	19	0.820	0.083	0.652	0.911
Pregnant women slept under an ITN last night	0.678	0.093	27	19	1.038	0.137	0.492	0.864
Pregnant women slept under an ITN last night in household with at least one ITN	0.861	0.092	21	15	1.175	0.106	0.678	1.000

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.20 Sampling errors: Indoor residual spraying districts sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.915	0.010	1,064	968	1.176	0.011	0.895	0.935
Average number of mosquito nets per household	2.492	0.071	1,064	968	1.439	0.028	2.351	2.633
Ownership of at least one ITN	0.907	0.012	1,064	968	1.307	0.013	0.883	0.930
Average number of ITNs per household	2.450	0.070	1,064	968	1.439	0.029	2.309	2.590
Ownership of at least one ITN for every two persons	0.557	0.020	1,063	966	1.338	0.037	0.516	0.597
WOMEN								
Urban residence	0.294	0.016	1,112	1,000	1.164	0.054	0.262	0.326
No education	0.085	0.010	1,112	1,000	1.199	0.118	0.065	0.105
Secondary education or higher	0.265	0.027	1,112	1,000	2.006	0.100	0.212	0.318
Literacy	0.713	0.028	1,112	1,000	2.029	0.039	0.658	0.768
4+ ANC visits	0.807	0.023	341	308	1.089	0.029	0.760	0.854
8+ ANC visits	0.100	0.012	341	308	0.711	0.116	0.077	0.123
Received 1+ doses of SP/Fansidar	0.975	0.009	341	308	1.093	0.010	0.956	0.993
Received 2+ doses of SP/Fansidar	0.890	0.020	341	308	1.191	0.023	0.850	0.931
Received 3+ doses of SP/Fansidar	0.760	0.025	341	308	1.085	0.033	0.710	0.810
CHILDREN								
Child slept under any mosquito net last night	0.734	0.021	981	890	1.192	0.029	0.691	0.776
Child slept under an ITN last night	0.720	0.023	981	890	1.235	0.032	0.674	0.765
Child slept under an ITN last night in household with at least one ITN	0.786	0.019	897	816	1.098	0.024	0.748	0.824
Child had fever in past 2 weeks	0.417	0.021	807	727	1.098	0.050	0.376	0.459
Child had blood taken from finger/heel	0.517	0.034	335	303	1.169	0.066	0.448	0.586
Child sought care/treatment from a health facility	0.821	0.025	335	303	1.117	0.030	0.771	0.870
Child took ACT	0.892	0.020	204	183	0.924	0.023	0.852	0.932
Child has malaria (based on rapid test)	0.205	0.034	862	783	2.143	0.164	0.138	0.273
Child has malaria (based on microscopy)	0.116	0.022	862	783	1.821	0.189	0.072	0.160
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.805	0.044	114	102	1.179	0.054	0.717	0.892
Pregnant women slept under an ITN last night	0.784	0.044	114	102	1.148	0.056	0.696	0.873
Pregnant women slept under an ITN last night in household with at least one ITN	0.840	0.040	107	95	1.138	0.048	0.759	0.920

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.21 Sampling errors: High altitude districts sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.894	0.017	1,083	739	1.788	0.019	0.860	0.927
Average number of mosquito nets per household	2.573	0.088	1,083	739	1.783	0.034	2.398	2.749
Ownership of at least one ITN	0.883	0.017	1,083	739	1.724	0.019	0.849	0.917
Average number of ITNs per household	2.538	0.089	1,083	739	1.813	0.035	2.359	2.716
Ownership of at least one ITN for every two persons	0.635	0.022	1,082	738	1.473	0.034	0.592	0.678
WOMEN								
Urban residence	0.268	0.033	1,024	699	2.361	0.122	0.202	0.333
No education	0.044	0.008	1,024	699	1.200	0.175	0.029	0.060
Secondary education or higher	0.425	0.033	1,024	699	2.110	0.077	0.360	0.490
Literacy	0.823	0.018	1,024	699	1.550	0.022	0.786	0.860
4+ ANC visits	0.766	0.026	283	193	1.012	0.033	0.715	0.817
8+ ANC visits	0.112	0.021	283	193	1.094	0.184	0.071	0.153
Received 1+ doses of SP/Fansidar	0.961	0.013	283	193	1.088	0.013	0.936	0.986
Received 2+ doses of SP/Fansidar	0.853	0.025	283	193	1.193	0.030	0.802	0.903
Received 3+ doses of SP/Fansidar	0.716	0.030	283	193	1.121	0.042	0.656	0.777
CHILDREN								
Child slept under any mosquito net last night	0.727	0.024	840	573	1.296	0.034	0.679	0.776
Child slept under an ITN last night	0.718	0.025	840	573	1.321	0.035	0.667	0.768
Child slept under an ITN last night in household with at least one ITN	0.794	0.022	758	518	1.254	0.028	0.750	0.839
Child had fever in past 2 weeks	0.182	0.018	697	474	1.167	0.100	0.146	0.218
Child had blood taken from finger/heel	0.475	0.070	128	86	1.478	0.148	0.335	0.615
Child sought care/treatment from a health facility	0.857	0.039	128	86	1.242	0.046	0.778	0.935
Child took ACT	0.930	0.023	72	48	0.755	0.025	0.884	0.976
Child has malaria (based on rapid test)	0.073	0.025	752	513	2.220	0.341	0.023	0.123
Child has malaria (based on microscopy)	0.037	0.014	754	514	1.699	0.362	0.010	0.064
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.779	0.044	77	53	0.939	0.057	0.690	0.868
Pregnant women slept under an ITN last night	0.715	0.054	77	53	1.044	0.075	0.608	0.823
Pregnant women slept under an ITN last night in household with at least one ITN	0.808	0.053	68	47	1.104	0.066	0.702	0.914

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.22 Sampling errors: Seasonal malaria chemoprevention districts sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.783	0.038	567	272	2.182	0.049	0.707	0.858
Average number of mosquito nets per household	1.938	0.189	567	272	2.694	0.097	1.560	2.315
Ownership of at least one ITN	0.776	0.037	567	272	2.129	0.048	0.701	0.850
Average number of ITNs per household	1.899	0.185	567	272	2.698	0.098	1.528	2.270
Ownership of at least one ITN for every two persons	0.383	0.038	567	272	1.840	0.098	0.308	0.458
WOMEN								
Urban residence	0.276	0.016	531	259	0.849	0.060	0.243	0.309
No education	0.645	0.057	531	259	2.747	0.089	0.530	0.760
Secondary education or higher	0.116	0.034	531	259	2.456	0.296	0.047	0.184
Literacy	0.237	0.050	531	259	2.690	0.211	0.137	0.337
4+ ANC visits	0.747	0.050	197	96	1.590	0.066	0.647	0.846
8+ ANC visits	0.096	0.028	197	96	1.322	0.290	0.041	0.152
Received 1+ doses of SP/Fansidar	0.975	0.013	197	96	1.140	0.013	0.949	1.000
Received 2+ doses of SP/Fansidar	0.929	0.019	197	96	1.036	0.020	0.891	0.967
Received 3+ doses of SP/Fansidar	0.817	0.026	197	96	0.946	0.032	0.764	0.869
CHILDREN								
Child slept under any mosquito net last night	0.611	0.039	617	297	1.597	0.064	0.533	0.689
Child slept under an ITN last night	0.607	0.039	617	297	1.593	0.064	0.529	0.685
Child slept under an ITN last night in household with at least one ITN	0.748	0.023	501	241	1.005	0.031	0.702	0.794
Child had fever in past 2 weeks	0.380	0.039	537	263	1.664	0.103	0.302	0.459
Child had blood taken from finger/heel	0.813	0.036	204	100	1.245	0.044	0.741	0.885
Child sought care/treatment from a health facility	0.921	0.018	204	100	0.928	0.020	0.885	0.958
Child took ACT	0.676	0.076	108	53	1.524	0.113	0.524	0.829
Child has malaria (based on rapid test)	0.398	0.068	538	259	2.857	0.172	0.261	0.535
Child has malaria (based on microscopy)	0.262	0.053	537	258	2.537	0.201	0.157	0.368
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.693	0.054	88	42	1.096	0.078	0.585	0.802
Pregnant women slept under an ITN last night	0.682	0.057	88	42	1.143	0.084	0.568	0.796
Pregnant women slept under an ITN last night in household with at least one ITN	0.789	0.046	76	37	0.979	0.059	0.696	0.882

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

Table B.23 Sampling errors: Refuges settlements sample, Uganda MIS 2024–25

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (N)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
HOUSEHOLDS								
Ownership of at least one mosquito net	0.519	0.075	590	590	3.588	0.144	0.370	0.668
Average number of mosquito nets per household	1.064	0.234	590	590	4.215	0.220	0.596	1.533
Ownership of at least one ITN	0.511	0.072	590	590	3.486	0.142	0.366	0.656
Average number of ITNs per household	1.051	0.230	590	590	4.135	0.218	0.592	1.511
Ownership of at least one ITN for every two persons	0.207	0.048	589	589	2.874	0.233	0.110	0.304
WOMEN								
Urban residence	0.000	0.000	664	664	na	na	0.000	0.000
No education	0.381	0.041	664	664	2.179	0.108	0.299	0.464
Secondary education or higher	0.116	0.026	664	664	2.076	0.223	0.064	0.168
Literacy	0.393	0.049	664	664	2.592	0.126	0.295	0.492
4+ ANC visits	0.848	0.034	180	146	1.278	0.041	0.779	0.917
8+ ANC visits	0.105	0.032	180	146	1.379	0.301	0.042	0.169
Received 1+ doses of SP/Fansidar	0.920	0.043	180	146	2.118	0.047	0.834	1.000
Received 2+ doses of SP/Fansidar	0.901	0.041	180	146	1.823	0.045	0.820	0.983
Received 3+ doses of SP/Fansidar	0.758	0.045	180	146	1.392	0.059	0.669	0.847
CHILDREN								
Child slept under any mosquito net last night	0.374	0.049	528	490	1.772	0.131	0.276	0.472
Child slept under an ITN last night	0.370	0.049	528	490	1.764	0.131	0.273	0.468
Child slept under an ITN last night in household with at least one ITN	0.697	0.032	306	260	0.987	0.046	0.632	0.762
Child had fever in past 2 weeks	0.252	0.045	474	449	1.939	0.177	0.163	0.341
Child had blood taken from finger/heel	0.603	0.053	139	113	1.065	0.087	0.498	0.709
Child sought care/treatment from a health facility	0.795	0.045	139	113	1.106	0.057	0.705	0.885
Child took ACT	0.874	0.068	78	75	1.682	0.078	0.737	1.000
Child has malaria (based on rapid test)	0.159	0.067	466	438	3.147	0.418	0.026	0.292
Child has malaria (based on microscopy)	0.098	0.046	466	438	2.717	0.468	0.006	0.189
PREGNANT WOMEN								
Pregnant women slept under any mosquito net last night	0.326	0.082	51	73	1.415	0.251	0.162	0.490
Pregnant women slept under an ITN last night	0.326	0.082	51	73	1.415	0.251	0.162	0.490
Pregnant women slept under an ITN last night in household with at least one ITN	0.779	0.096	27	31	1.054	0.123	0.587	0.972

ACT = artemisinin-based combination therapy; ANC = antenatal care; ITN = insecticide-treated net; SP = sulphadoxine-pyrimethamine

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Uganda MIS 2024–25

	Male		Female			Male		Female	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	695	3.3	683	3.0	42	213	1.0	175	0.8
1	693	3.3	641	2.8	43	127	0.6	152	0.7
2	718	3.4	750	3.3	44	99	0.5	117	0.5
3	794	3.7	734	3.2	45	239	1.1	223	1.0
4	774	3.6	802	3.5	46	101	0.5	107	0.5
5	708	3.3	648	2.8	47	102	0.5	87	0.4
6	793	3.7	824	3.6	48	134	0.6	129	0.6
7	781	3.7	761	3.3	49	81	0.4	87	0.4
8	669	3.1	696	3.0	50	226	1.1	360	1.6
9	652	3.1	614	2.7	51	69	0.3	114	0.5
10	726	3.4	798	3.5	52	137	0.6	196	0.9
11	515	2.4	502	2.2	53	96	0.4	108	0.5
12	684	3.2	810	3.5	54	92	0.4	138	0.6
13	667	3.1	745	3.3	55	124	0.6	125	0.5
14	613	2.9	731	3.2	56	97	0.5	112	0.5
15	555	2.6	395	1.7	57	52	0.2	65	0.3
16	519	2.4	433	1.9	58	77	0.4	88	0.4
17	429	2.0	392	1.7	59	57	0.3	53	0.2
18	508	2.4	521	2.3	60	148	0.7	207	0.9
19	313	1.5	383	1.7	61	30	0.1	52	0.2
20	463	2.2	541	2.4	62	82	0.4	85	0.4
21	228	1.1	299	1.3	63	52	0.2	51	0.2
22	321	1.5	364	1.6	64	54	0.3	72	0.3
23	238	1.1	325	1.4	65	88	0.4	109	0.5
24	323	1.5	347	1.5	66	30	0.1	34	0.1
25	359	1.7	437	1.9	67	42	0.2	55	0.2
26	213	1.0	287	1.3	68	45	0.2	43	0.2
27	264	1.2	291	1.3	69	33	0.2	32	0.1
28	305	1.4	362	1.6	70	84	0.4	116	0.5
29	183	0.9	245	1.1	71	18	0.1	18	0.1
30	389	1.8	446	1.9	72	29	0.1	41	0.2
31	119	0.6	177	0.8	73	20	0.1	27	0.1
32	267	1.3	298	1.3	74	22	0.1	28	0.1
33	113	0.5	150	0.7	75	42	0.2	54	0.2
34	168	0.8	195	0.8	76	19	0.1	31	0.1
35	270	1.3	281	1.2	77	16	0.1	14	0.1
36	164	0.8	189	0.8	78	22	0.1	34	0.2
37	168	0.8	159	0.7	79	22	0.1	21	0.1
38	238	1.1	300	1.3	80+	155	0.7	236	1.0
39	123	0.6	149	0.7	Don't know	26	0.1	12	0.1
40	281	1.3	316	1.4					
41	64	0.3	92	0.4	Total	21,269	100.0	22,922	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Figure C.1 **Population pyramid**

Percent distribution of the household population by single year and sex

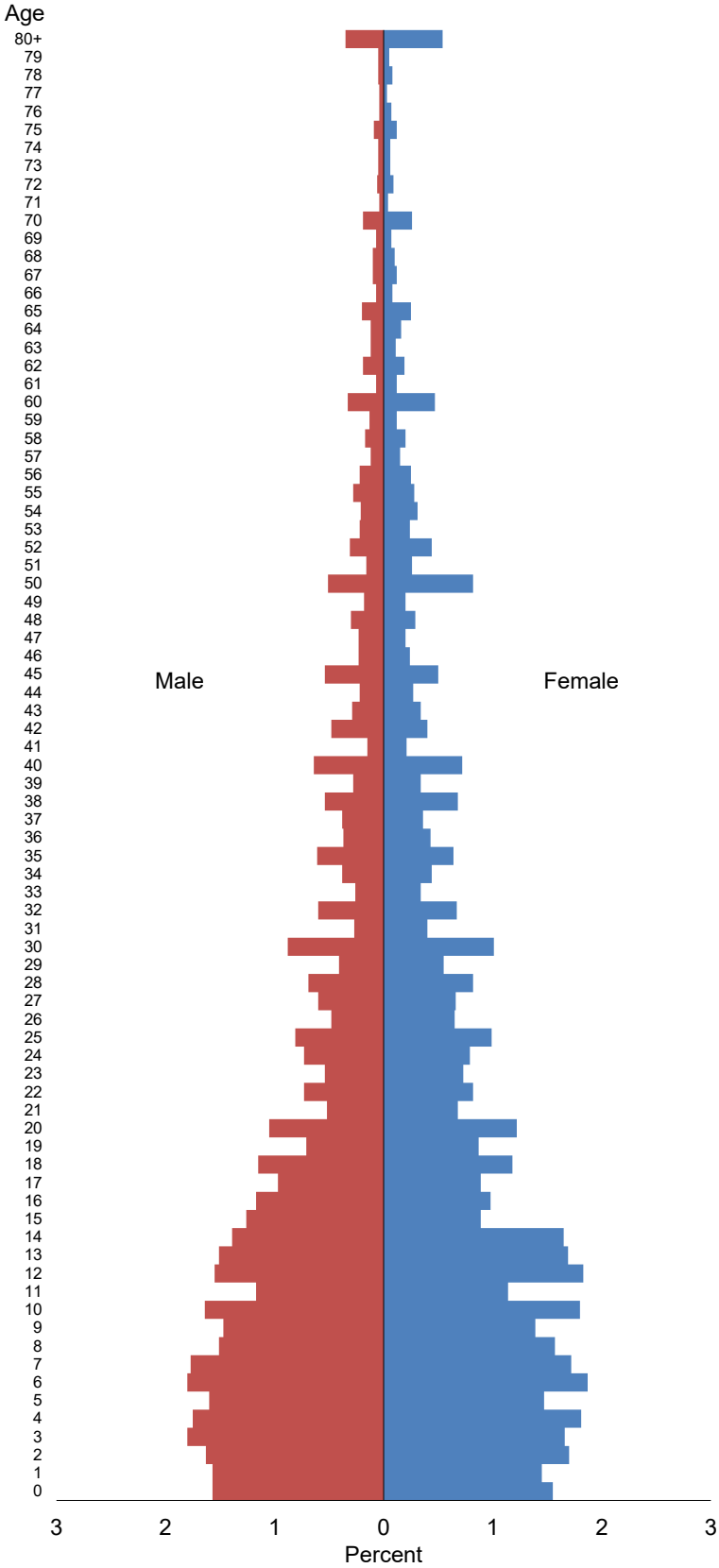

Table C.2 Age distribution of eligible and interviewed women

De facto household population of women age 10–54, number and percent distribution of interviewed women age 15–49, and percentage of eligible women who were interviewed (weighted), by 5-year age groups, Uganda MIS 2024–25

Age group	Household population of women age 10–54	Interviewed women age 15–49		Percentage of eligible women interviewed
	Number	Number	Percentage	
10–14	3,586	na	na	na
15–19	2,124	2,045	22.3	96.3
20–24	1,876	1,829	19.9	97.5
25–29	1,622	1,578	17.2	97.3
30–34	1,266	1,237	13.5	97.7
35–39	1,079	1,049	11.4	97.2
40–44	853	825	9.0	96.8
45–49	632	607	6.6	96.0
50–54	916	na	na	na
15–49	9,453	9,170	100.0	97.0
Ratios				
10–14 to 15–19	na	na	na	168.8
50–54 to 45–49	na	na	na	145.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the Household Questionnaire.
na = not applicable

Table C.3 Age displacement at ages 14/15

Number of women and men age 12–18 listed in the household schedule by single-year age and age ratio 15/14, according to region (weighted), Uganda MIS 2024–25

Subregion	Age							Total age 12–18	Age ratio (age 15/ age 14)
	12	13	14	15	16	17	18		
				WOMEN					
Kampala	13	16	13	9	7	8	14	80	73.3
Buganda	229	227	202	112	138	119	173	1,200	55.2
South Buganda	124	141	120	86	97	82	107	757	71.6
North Buganda	105	86	83	26	40	37	66	443	31.6
Busoga	86	58	67	25	28	34	43	342	36.8
Bukedi	53	55	37	24	33	23	31	257	65.8
Elgon	45	34	44	22	23	24	30	221	51.2
Teso	38	36	49	20	23	34	28	227	41.3
Lango	48	29	46	21	22	20	33	219	46.4
Acholi	45	41	32	13	18	13	12	174	41.5
Karamoja	19	27	18	10	6	7	18	105	57.0
West Nile	42	35	44	27	23	28	41	241	62.5
Bunyoro	60	51	46	29	28	22	35	271	61.7
Toro	58	60	60	30	34	22	45	308	49.3
Ankole	61	60	75	33	45	39	21	335	44.3
Kigezi	28	29	23	27	24	15	13	159	118.5
Total	824	759	756	404	450	409	537	4,139	53.4
				MEN					
Kampala	9	10	11	10	9	10	10	70	92.6
Buganda	195	192	172	158	139	113	128	1,096	92.1
South Buganda	107	112	83	76	82	71	75	607	92.2
North Buganda	89	80	89	82	57	42	52	489	92.0
Busoga	57	56	58	34	52	35	37	329	58.5
Bukedi	44	35	36	31	23	27	30	225	85.9
Elgon	34	37	30	18	28	21	23	192	59.2
Teso	36	39	37	34	27	33	30	236	91.4
Lango	38	35	36	30	27	28	33	227	82.1
Acholi	28	26	25	30	26	22	37	194	119.1
Karamoja	20	17	18	17	15	8	14	110	97.0
West Nile	45	43	47	44	33	24	38	274	94.5
Bunyoro	46	53	38	42	36	29	31	276	110.7
Toro	56	53	48	42	41	20	47	308	88.8
Ankole	52	49	42	51	54	48	52	348	122.3
Kigezi	36	27	23	23	21	21	15	168	101.4
Total	697	672	622	566	532	440	525	4,054	91.1

Table C.4 Age displacement at ages 49/50

Number of women and men age 47–53 listed in the household schedule by single-year age and age ratio 50/49, according to region (weighted), Uganda MIS 2024–25

Subregion	Age 47	48	49	50	51	52	53	Total age 47–53	Age ratio (age 50/ age 49)
				WOMEN					
Kampala	2	2	1	8	2	7	3	24	633.3
Buganda	29	43	30	132	47	57	30	368	437.2
South Buganda	18	25	22	75	31	29	11	211	342.0
North Buganda	11	18	8	56	16	29	19	158	695.6
Busoga	7	8	8	28	11	14	6	81	352.0
Bukedi	10	8	4	18	3	13	6	62	433.6
Elgon	1	4	4	13	4	11	3	41	306.3
Teso	5	5	3	30	3	5	6	57	1,119.2
Lango	4	9	3	9	5	9	9	48	265.0
Acholi	1	5	2	16	7	5	8	45	764.5
Karamoja	1	3	1	5	2	5	6	24	369.2
West Nile	5	10	10	12	5	16	9	68	128.7
Bunyoro	5	6	4	26	8	9	9	67	656.6
Toro	6	8	3	24	5	19	2	66	719.5
Ankole	8	11	9	37	11	24	8	107	415.9
Kigezi	4	8	6	15	4	8	6	51	245.0
Total	88	130	89	372	117	202	111	1,110	418.4
				MEN					
Kampala	2	5	3	7	2	4	2	25	212.5
Buganda	32	25	21	70	29	33	30	239	338.8
South Buganda	22	17	16	35	21	15	17	144	222.2
North Buganda	10	8	5	35	8	18	12	96	726.5
Busoga	8	13	4	35	7	12	4	84	982.2
Bukedi	5	9	7	15	3	13	6	58	225.6
Elgon	4	7	6	11	3	11	6	48	176.4
Teso	5	13	6	13	1	8	8	53	219.3
Lango	5	11	8	11	5	6	7	53	144.4
Acholi	5	5	3	15	4	8	7	47	576.3
Karamoja	1	2	3	4	0	3	2	15	132.6
West Nile	8	13	7	14	1	9	3	55	195.4
Bunyoro	5	11	8	15	2	8	9	56	193.2
Toro	14	9	3	18	5	11	4	65	521.5
Ankole	8	18	4	15	4	12	14	75	405.8
Kigezi	8	6	7	7	5	7	4	43	100.0
Total	108	147	89	251	71	145	106	916	282.9

Table C.5 Live births by years preceding the survey

Number of live births, percentage with year and month of birth given, sex ratio at birth, and ratio by years preceding the survey, according to living, dead, and total children (weighted), Uganda MIS 2024–25

Years preceding survey	Number of births			Percentage with year and month of birth given			Sex ratio at birth of live births[1]			Ratio by years preceding survey[2]		
	Living children	Dead children	Total	Living children	Dead children	Total	Living children	Dead children	Total	Living children	Dead children	Total
0	1,383	31	1,413	99.9	100.0	99.9	108.0	139.1	108.6	na	na	na
1	1,234	22	1,257	99.7	93.6	99.6	107.0	84.3	106.6	95.8	77.4	95.4
2	1,195	27	1,223	99.4	100.0	99.4	91.1	51.1	90.0	97.5	131.7	98.0
3	1,219	19	1,238	98.9	100.0	98.9	104.1	128.4	104.4	103.9	84.9	103.5
4	1,151	17	1,169	98.9	90.9	98.8	93.6	145.1	94.2	107.7	106.6	107.7
5	919	14	932	99.2	91.1	99.1	103.5	303.0	105.0	158.6	157.4	158.5
6	7	0	7	100.0	-	100.0	224.6	-	224.6	1.6	0.0	1.6
0–4	6,182	117	6,299	99.4	97.4	99.4	100.9	99.7	100.8	na	na	na
5–9	926	14	940	99.3	91.1	99.1	104.1	303.0	105.6	na	na	na
All	7,108	130	7,239	99.4	96.8	99.3	101.3	110.9	101.4	na	na	na

na = not applicable

[1] $(B_m/B_f)x100$, where B_m and B_f are the numbers of male and female births, respectively

[2] $[2P_x/(P_{x-1}+P_{x+1})]x100$, where P_x is the number of pregnancy outcomes in year x preceding the survey

Table C.6 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Uganda MIS 2024–25

Subject	Reference group	Percentage with information missing	Number of cases
Date of live birth (past 5 years)			
Missing day only	Live births in the 5 years preceding the survey	0.44	6,299
Missing month, but year reported		0.64	6,299
Date of birth of women			
Missing month, but year reported	Women age 15–49	4.00	9,238
Missing year		0.11	9,238
Malaria			
Missing day, month, and/or year	Living children age 6–59 months (from the Biomarker Questionnaire)	0.30	6,658

Table C.7 Observation of mosquito nets

Percentage of all mosquito nets observed by the interviewers, according to background characteristics (weighted), Uganda MIS 2024–25

Background characteristic	Percentage of mosquito nets observed by interviewers	Number of mosquito nets
Residence		
Urban	88.4	9,125
Rural	92.6	12,858
Subregion		
Kampala	87.3	593
Buganda	88.4	6,693
South Buganda	85.6	3,999
North Buganda	92.6	2,694
Busoga	82.7	1,691
Bukedi	92.7	1,153
Elgon	86.5	1,044
Teso	97.7	1,162
Lango	95.4	1,228
Acholi	95.6	720
Karamoja	92.5	527
West Nile	98.4	1,371
Bunyoro	98.1	1,495
Toro	83.6	1,378
Ankole	98.2	1,960
Kigezi	83.0	967
Wealth quintile		
Lowest	95.8	3,501
Second	90.8	3,884
Middle	90.8	4,402
Fourth	91.3	4,651
Highest	87.6	5,545
Total	90.9	21,983

Table C.8 Number of enumeration areas completed by month and subregion

During the period of fieldwork, number of enumeration areas (EAs) completed by month, according to region; and percent distribution of EAs completed by month, Uganda MIS 2024–25

Subregion	Month of fieldwork			Number of EAs
	January	November	December	
Kampala	9	0	12	21
Buganda	22	0	28	50
South Buganda	12	0	13	25
North Buganda	10	0	15	25
Busoga	9	0	14	23
Bukedi	9	0	10	19
Elgon	11	1	8	20
Teso	4	0	16	20
Lango	6	0	15	21
Acholi	10	0	10	20
Karamoja	12	0	8	20
West Nile	6	0	16	22
Bunyoro	12	0	10	22
Toro	9	0	13	22
Ankole	12	0	10	22
Kigezi	8	0	12	20
Total number of EAs	139	1	182	322
Percent distribution	43.2	0.3	56.5	100.0

Note: EAs are classified by month according to the date by which the last Biomarker Questionnaire in the EA was completed.

Table C.9 Positive rapid diagnostic test results by month and region

Among children age 6–59 months tested for malaria by rapid diagnostic test, percentage who tested positive by month of fieldwork, according to subregion, Uganda MIS 2024–25

Subregion	Percentage of children classified as having malaria by month of fieldwork			Total percentage	Number of children
	January	November	December		
Kampala	2.0	*	0.0	0.9	98
Buganda	11.7	*	9.7	10.7	1,593
South Buganda	5.0	*	2.0	3.9	909
North Buganda	22.6	*	18.0	19.9	684
Busoga	39.6	*	23.5	29.5	569
Bukedi	24.8	*	5.6	16.2	434
Elgon	17.2	*	6.4	12.8	318
Teso	42.0	(45.6)	44.7	44.1	368
Lango	51.6	*	63.3	59.6	366
Acholi	44.0	*	48.7	46.5	268
Karamoja	42.0	*	36.7	39.9	258
West Nile	9.8	*	19.0	16.6	416
Bunyoro	18.3	*	36.8	26.3	479
Toro	12.6	*	14.7	13.9	463
Ankole	1.1	*	3.2	2.0	434
Kigezi	0.7	*	1.1	0.9	237
Total	20.2	18.7	21.9	21.1	6,301

Note: Figures in parentheses are based on 25–49 unweighted cases. An asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Table C.10 Concordance and discordance between rapid diagnostic test and microscopy results

Among children age 6–59 months tested for malaria, percent distribution of results according to concordance and discordance between rapid diagnostic test (RDT) and microscopy test results, Uganda MIS 2024–25

	Concordance		Discordance				
	RDT+/ microscopy+	RDT–/ microscopy-	RDT+/ microscopy-	RDT–/ microscopy+	Other[1]	Total percentage	Number of children
Total	10.6	77.0	10.5	1.9	0.0	100.0	6,300

[1] Includes children for whom microscopy results could not be determined because of slide loss, slide breakage, or smear quality

PERSONS INVOLVED IN THE 2024–25 UGANDA MALARIA INDICATOR SURVEY

Appendix **D**

Ministry of Health National Malaria Control Division

Dr. D. Atwiine	Permanent Secretary
Dr. H. Mwebesa	Director General of Health Services
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Dr. S. Turyahabwe	Commissioner, National Communicable Disease Control and Prevention
Dr. J. Opigo	Program Manager
Dr. B. Agaba	Principal Investigator
Ms. L. Baguma	Program Officer
Dr. M. Amutuhaire	Medical Officer
Dr. G. Rukundo	Principal Medical Officer
Dr. J. Nabakooza	Senior Medical Officer
Dr. R. Naturinda	Senior Medical Officer
Mr. M. Kasule	Monitoring and Evaluation Specialist
Mr. R. Kimuli	Monitoring and Evaluation Specialist
Mr. P. Mbabazi	Finance and Multisectoral
Mr. M. Adriko	Senior Entomologist
Ms. R. Nabwire	Community Case Management Coordinator
Dr. D. Rutazaana	Global Fund Facilitator
Ms. R. Muwanika	Program Assistant
Ms. J. Basirika	Program Assistant
Dr. I. Ssewanyana	Director, National Health Laboratory Services Butabika

Uganda Bureau of Statistics

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P. Ntale	Survey Technical Expert
B. Twesigye	Survey Technical Expert
A. Kemigisha	Survey Technical Expert
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QUESTIONNAIRES

Appendix E

FORMATTING DATE: 31 May 2022
ENGLISH LANGUAGE: 31 May 2022

2024 UGANDA MALARIA INDICATOR SURVEY
HOUSEHOLD QUESTIONNAIRE

Uganda
NMCD/UBOS

IDENTIFICATION

EA NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . [ ][ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ][ ]

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ] MONTH [ ][ ] YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	INT. NO. [ ][ ][ ][ ]
RESULT*	_____	_____	_____	RESULT* [ ]
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD [ ][ ]

TOTAL ELIGIBLE WOMEN [ ][ ]

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE [ ][ ]

LANGUAGE OF QUESTIONNAIRE** [0][1] LANGUAGE OF INTERVIEW** [ ][ ] NATIVE LANGUAGE OF RESPONDENT** [ ][ ] TRANSLATOR USED (YES = 1, NO = 2) [ ]

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:

01 ENGLISH
02 LUGANDA
03 LUO
04 LUGBARA
05 ATESO
06 RUNYANKOLE/RUKIGA
07 RUNYORO/RUTORO
08 KARAMAJONG
09 LUSOGA
96 OTHER

TEAM	TEAM SUPERVISOR		CAPI SUPERVISOR (2)	
[ ][ ]	_____	[ ][ ][ ][ ]	_____	[ ][ ][ ][ ]
NUMBER	NAME	NUMBER	NAME	NUMBER

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INTRODUCTION AND CONSENT

Hello. My name is _____. I am working with the Ministry of Health/UBOS. We are conducting a survey about malaria all over Uganda. The information we collect will help the government to plan health services. Your household was selected for the survey. I would like to ask you some questions about your household. The questions usually take about 15 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING.

Do you have any additional questions?
May I begin the interview?

SIGNATURE OF INTERVIEWER _____ DATE _____

RESPONDENT AGREES TO BE INTERVIEWED . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . 2 → END

100	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]

HOUSEHOLD SCHEDULE

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY	
1	2	3	4	5	6	7	8	9
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER ASKING QUESTIONS 2-7 FOR EACH PERSON ASK QUESTIONS 7A-7C TO BE SURE THAT THE LISTING IS COMPLETE.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD '95'.	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
01			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	01	01
02			1 2	1 2	1 2		02	02
03			1 2	1 2	1 2		03	03
04			1 2	1 2	1 2		04	04
05			1 2	1 2	1 2		05	05
06			1 2	1 2	1 2		06	06
07			1 2	1 2	1 2		07	07
08			1 2	1 2	1 2		08	08
09			1 2	1 2	1 2		09	09
10			1 2	1 2	1 2		10	10

7A) Just to make sure that I have a complete listing: are there any other people such as small children or infants that we have not listed?	YES ☐ →	ADD TO TABLE	NO ☐
7B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here?	YES ☐ →	ADD TO TABLE	NO ☐
7C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed?	YES ☐ →	ADD TO TABLE	NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	What is the main source of drinking water for members of your household?	**PIPED WATER** PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PIPED TO NEIGHBOR . . . . . 13 PUBLIC TAP/STANDPIPE . . . . . 14 TUBE WELL OR BOREHOLE . . . . . 21 **DUG WELL** PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 **WATER FROM SPRING** PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 BICYCLE WITH JERRYCANS . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 SACHET WATER . . . . . 92 OTHER _____ 96 (SPECIFY)	105 103 103
102	What is the main source of water used by your household for other purposes such as cooking and handwashing?	**PIPED WATER** PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PIPED TO NEIGHBOR . . . . . 13 PUBLIC TAP/STANDPIPE . . . . . 14 TUBE WELL OR BOREHOLE . . . . . 21 **DUG WELL** PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 **WATER FROM SPRING** PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 BICYCLE WITH JERRYCANS . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 OTHER _____ 96 (SPECIFY)	105
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	105
104	How long does it take to go there, get water, and come back?	MINUTES . . . . . [ ][ ][ ] DON'T KNOW 998	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
105	What kind of toilet facility do members of your household usually use? IF NOT POSSIBLE TO DETERMINE, ASK PERMISSION TO OBSERVE THE FACILITY.	**FLUSH OR POUR FLUSH TOILET** FLUSH TO PIPED SEWER SYSTEM . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . . . 14 FLUSH, DON'T KNOW WHERE . . . . . 15 **PIT LATRINE** VENTILATED IMPROVED PIT LATRINE . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/OPEN PIT . . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRIN . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 109
106	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 108
107	Including your own household, how many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . [0][ ] 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
108	Where is this toilet facility located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	
109	In your household, what type of cookstove is mainly used for cooking?	ELECTRIC STOVE . . . . . 01 SOLAR COOKER . . . . . 02 LIQUIFIED PETROLEUM GAS (LPG)/ COOKING GAS STOVE . . . . . 03 PIPED NATURAL GAS STOVE . . . . . 04 BIOGAS STOVE . . . . . 05 LIQUID FUEL STOVE . . . . . 06 MANUFACTURED SOLID FUEL STOVE . . . . 07 TRADITIONAL SOLID FUEL STOVE . . . . . 08 THREE STONE STOVE/OPEN FIRE . . . . . 09 NO FOOD COOKED IN HOUSEHOLD . . . . . 95 OTHER _____ 96 (SPECIFY)	01–05 → 111 95 → 111
110	What type of fuel or energy source is used in this cookstove?	ALCOHOL/ETHANOL . . . . . 01 GASOLINE/DIESEL . . . . . 02 KEROSENE/PARAFFIN . . . . . 03 COAL/LIGNITE . . . . . 04 CHARCOAL . . . . . 05 WOOD . . . . . 06 STRAW/SHRUBS/GRASS . . . . . 07 AGRICULTURAL CROP . . . . . 08 ANIMAL DUNG/WASTE . . . . . 09 PROCESSED BIOMASS (PELLETS) OR WOODCHIPS . . . . . 10 GARBAGE/PLASTIC . . . . . 11 SAWDUST . . . . . 12 OTHER _____ 96 (SPECIFY)	
111	How many rooms in this household are used for sleeping?	ROOMS . . . . . [ ][ ]	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 114
113	How many of the following animals does this household own? IF NONE, RECORD '00'. IF 95 OR MORE, RECORD '95'. IF UNKNOWN, RECORD '98'. a) Local cattle? b) Exotic/cross-breed cattle? c) Horses, donkeys, or mules? d) Goats? e) Sheep? f) Chickens or other poultry? g) Pigs?	a) LOCAL CATTLE . . . . . [ ][ ] b) EXOTIC/CROSS-BREED CATTLE [ ][ ] c) HORSES/DONKEYS/MULES . . . . [ ][ ] d) GOATS . . . . . [ ][ ] e) SHEEP . . . . . [ ][ ] f) CHICKENS/POULTRY . . . . . [ ][ ] g) PIGS . . . . . [ ][ ]	
114	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 116
115	How many acres of agricultural land do members of this household own? IF 95 OR MORE ACRES, RECORD '950'	ACRES . . . . . 1 [ ][ ] . [ ] 95 OR MORE ACRES . . . . . 950 DON'T KNOW 998	
116	Does your household have: a) Electricity? b) A radio? c) A television? d) A non-mobile telephone? e) A computer? f) A refrigerator? g) A cassette/CD/DVD player? h) A table? i) A chair? j) A sofa set? k) A bed? l) A cupboard? m) A clock?	YES NO a) ELECTRICITY . . . . . 1 2 b) RADIO . . . . . 1 2 c) TELEVISION . . . . . 1 2 d) NON-MOBILE TELEPHONE . . 1 2 e) COMPUTER . . . . . 1 2 f) REFRIGERATOR . . . . . 1 2 g) PLAYER . . . . . 1 2 h) TABLE . . . . . 1 2 i) CHAIR . . . . . 1 2 j) SOFA SET . . . . . 1 2 k) BED . . . . . 1 2 l) CUPBOARD . . . . . 1 2 m) CLOCK 1 2	
117	Does any member of this household own: a) A watch? b) A mobile phone? c) A bicycle? d) A motorcycle or motor scooter? e) An animal-drawn cart? f) A car or truck? g) A boat with a motor? h) A boat without a motor?	YES NO a) WATCH . . . . . 1 2 b) MOBILE PHONE . . . . . 1 2 c) BICYCLE . . . . . 1 2 d) MOTORCYCLE/SCOOTER . . 1 2 e) ANIMAL-DRAWN CART . . . . 1 2 f) CAR/TRUCK . . . . . 1 2 g) BOAT WITH MOTOR . . . . . 1 2 h) BOAT WITHOUT MOTOR 1 2	
118	Does any member of this household have an account in a bank or other financial institution?	YES . . . . . 1 NO 2	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
119	Does any member of this household use a mobile phone to make financial transactions such as sending or receiving money, paying bills, purchasing goods or services, or receiving wages?	YES . . . . . 1 NO 2	
120	At any time in the past 12 months, has anyone come into your dwelling to spray the interior walls against mosquitoes?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 120D
120A	How many months ago was the dwelling last sprayed? IF LESS THAN 1 MONTH, RECORD '00'	MONTHS AGO . . . . . [ ][ ]	
120B	Who sprayed the dwelling?	GOVERNMENT WORKER/PROGRAM . . . . . A PRIVATE COMPANY . . . . . B NONGOVERNMENTAL ORGANIZATION (NGO) C OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
120C	Did you pay for your dwelling to be sprayed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
120D	Is there a community worker or a village health team (VHT) member who distributes malaria medicines in your village or community?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 120F
120E	Does the community health worker or village health team (VHT) currently have malaria medicines available?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
120F	Is there a community worker or a village health team (VHT) member who conducts malaria testing in your village or community?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
121	Does your household have any mosquito nets?	YES . . . . . 1 NO 2	→ 131A
121A	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS . . . . . [ ]	

MOSQUITO NETS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	ASK THE RESPONDENT TO SHOW YOU ALL THE NETS IN THE HOUSEHOLD. OBSERVE AND ANSWER THE QUESTIONS FOR EACH NET, ONE BY ONE.		
122	ASSIGN EACH NET A SEQUENTIAL NUMBER AND RECORD THE NUMBER HERE.	NET NUMBER . . . . . [ ][ ]	
123	WAS THIS NET OBSERVED?	OBSERVED . . . . . 1 NOT OBSERVED 2	
124	How many months ago did your household get the mosquito net? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . . . [ ][ ] MORE THAN 36 MONTHS AGO . . . . . 95 NOT SURE 98	
125	OBSERVE OR ASK BRAND/TYPE OF MOSQUITO NET. IF BRAND IS UNKNOWN AND YOU CANNOT OBSERVE THE NET, SHOW PICTURES OF TYPICAL NET TYPES/BRANDS TO RESPONDENT.	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** PERMANET 3.0 . . . . . 11 PERMANET 2.0 . . . . . 12 INTERCEPTOR (IG2) . . . . . 13 YORKOOL . . . . . 14 ROYAL GUARD . . . . . 15 PERMANET DUAL . . . . . 16 DURANET . . . . . 17 DURANET PLUS . . . . . 18 OLYSET . . . . . 19 OLYSET PLUS . . . . . 20 VEERALIN . . . . . 21 DAWA PLUS/TANA NET . . . . . 22 LLIN DON'T KNOW BRAN . . . . . 23 OTHER LLIN 24 _____ (SPECIFY) OTHER TYPE (NOT LLIN) . . . . . 96 DON'T KNOW TYPE 98	
126	Did you get the net through a mass distribution, during an antenatal care visit, or during an immunization visit?	YES, MASS DISTRIBUTION . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 NO 4	→ 128
127	Where did you get the net?	GOVERNMENT HEALTH FACILITY . . . . . 01 PRIVATE HEALTH FACILITY . . . . . 02 PNFP/NGO . . . . . 03 PHARMACY . . . . . 04 SHOP/MARKET . . . . . 05 VILLAGE HEALTH TEAMS (VHT)/ CHW . . . . . 06 RELIGIOUS INSTITUTION . . . . . 07 SCHOOL . . . . . 08 HAWKER . . . . . 09 OTHER . . . . . 96 DON'T KNOW 98	

MOSQUITO NETS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
128	Did anyone sleep under this mosquito net last night?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	 → 130 → 131
129	Who slept under this mosquito net last night? RECORD THE PERSON'S NAME AND LINE NUMBER FROM HOUSEHOLD SCHEDULE.	NAME _____ LINE NUMBER . . . . . [ ][ ] NAME _____ LINE NUMBER . . . . . [ ][ ] NAME _____ LINE NUMBER . . . . . [ ][ ] NAME _____ LINE NUMBER . . . . . [ ][ ]	→ 131
130	What was the main reason this net was not used last night?	TOO HOT . . . . . 01 DON'T LIKE NET SHAPE/COLOR/SIZE . . . . . 02 DON'T LIKE SMELL . . . . . 03 UNABLE TO HANG NET . . . . . 04 SLEPT OUTDOORS . . . . . 05 USUAL USER DIDN'T SLEEP HERE LAST NIGHT . . . . . 06 NO MOSQUITOES/NO MALARIA . . . . . 07 EXTRA NET/SAVING FOR LATER . . . . . 08 NET TOO OLD/TOO MANY HOLES . . . . . 09 NO PLACE TO HANG NET . . . . . 10 OTHER _____ 96 (SPECIFY)	
131	GO BACK TO 122 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 131B		

MOSQUITO NETS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
131A	In the last 12 months, did any member of your household have a mosquito net?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	→ 132
131B	In the last 12 months has any member of your household disposed of a mosquito net?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	→ 132
131C	Now I want to talk about the last net that was disposed of. For how long did the household member use this net?	LESS THAN 2 YEARS . . . . . 1 2-4 YEARS . . . . . 2 MORE THAN 4 YEARS . . . . . 3 DON'T KNOW 8	
131D	What was the main reason the household member disposed of this mosquito net?	TORN . . . . . 11 NO LONGER REPELLED MOSQUITOE . . . . . 12 GOT A NEW ONE . . . . . 13 PUT TO THE STORAGE/ END OF RAINY SEASON . . . . . 14 INSTALLED SCREENS . . . . . 15 ITCHING/ SKIN IRRITATION/ HEALTH PROBLEM 16 CAN'T BREATH/ TOO HOT . . . . . 17 TOXIC CHEMICALS . . . . . 18 OTHER . . . . . 96 DON'T KNOW 98	
131E	How was the net disposed?	GARBAGE COLLECTION CENTER/ POINT . . 11 REPURPOSED FOR FARMING ACTIVITIES . . 12 REPURPOSED FOR WINDOW SCREENING . . 13 USED TO MAKE ROPES . . . . . 14 USED TO MAKE SWINGS/ FURNITURE . . . . . 15 USED TO MAKE FOOTBALLS . . . . . 16 REPURPOSED FOR GOAL POSTS . . . . . 17 USED AS A FISHING NET . . . . . 18 USED TO MAKE CLOTHING/ WEDDING VEIL . . 19 USED FOR BATHING/WASHING . . . . . 20 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

ADDITIONAL HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
132	OBSERVE MAIN MATERIAL OF THE FLOOR OF THE DWELLING. RECORD OBSERVATION.	**NATURAL FLOOR** EARTH/SAND . . . . . 11 DUNG . . . . . 12 **RUDIMENTARY FLOOR** WOOD PLANKS . . . . . 21 PALM/BAMBOO . . . . . 22 **FINISHED FLOOR** PARQUET OR POLISHED WOOD . . . . . 31 VINYL OR ASPHALT STRIPS . . . . . 32 CERAMIC TILES . . . . . 33 CEMENT . . . . . 34 CARPET . . . . . 35 STONES . . . . . 36 BRICKS . . . . . 37 OTHER _____ 96 (SPECIFY)	
133	OBSERVE MAIN MATERIAL OF THE ROOF OF THE DWELLING. RECORD OBSERVATION.	**NATURAL ROOFING** NO ROOF . . . . . 11 THATCH/PALM LEAF . . . . . 12 MUD . . . . . 13 **RUDIMENTARY ROOFING** RUSTIC MAT . . . . . 21 PALM/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 CARDBOARD . . . . . 24 TINS . . . . . 25 TARPAULIN . . . . . 26 **FINISHED ROOFING** IRON SHEETS . . . . . 31 WOOD . . . . . 32 ASBESTOS . . . . . 33 CERAMIC TILES . . . . . 34 CEMENT . . . . . 35 ROOFING SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
134	OBSERVE MAIN MATERIAL OF THE EXTERIOR WALLS OF THE DWELLING. RECORD OBSERVATION.	**NATURAL WALLS** NO WALLS . . . . . 11 THATCHED/STRAW . . . . . 12 DIRT . . . . . 13 **RUDIMENTARY WALLS** POLES WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNBURNT BRICKS WITH MU . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 UNBURNT BRICKS WITH PLASTER . . . . . 27 BURNT BRICKS WITH MUD . . . . . 28 **FINISHED WALLS** CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BURNT BRICKS WITH CEMENT . . . . . 33 CEMENT BLOCKS . . . . . 34 UNBURNT BRICKS WITH CEMENT . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
135	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

FORMATTING DATE: 31 May 2022
ENGLISH LANGUAGE: 31 May 2022

2024 UGANDA MALARIA INDICATOR SURVEY
WOMAN'S QUESTIONNAIRE

Uganda
NMCD/UBOS

IDENTIFICATION

EA NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBE . . . . . [ ][ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ][ ]

NAME AND LINE NUMBER OF WOMAN _____ [ ][ ]

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ] MONTH [ ][ ] YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	INT. NO. [ ][ ][ ][ ]
RESULT*	_____	_____	_____	RESULT* [ ]
NEXT VISIT:DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES: 1 COMPLETED 4 REFUSED
2 NOT AT HOME 5 PARTLY COMPLETED 7 OTHER _____ SPECIFY
3 POSTPONED 6 INCAPACITATED

LANGUAGE OF QUESTIONNAIRE** [0][1] LANGUAGE OF INTERVIEW** [ ][ ] NATIVE LANGUAGE OF RESPONDENT** [ ][ ] TRANSLATOR USED (YES = 1, NO = 2) [ ]

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:

Language Code		
01 ENGLISH	04 LUGBARA	07 RUNYORO/RUTORO
02 LUGANDA	05 ATESO	08 KARAMAJONG
03 LUO	06 RUNYANKOLE/RUKIGA	09 LUSOGA
		96 OTHER

TEAM	TEAM SUPERVISOR		CAPI SUPERVISOR (2)	
[ ][ ]	_____	[ ][ ][ ][ ]	_____	[ ][ ][ ][ ]
NUMBER	NAME	NUMBER	NAME	NUMBER

INTRODUCTION AND CONSENT

Hello. My name is _____. I am working with Ministry of Health/UBOS. We are conducting a survey about malaria all over Uganda. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 10 to 20 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING.

Do you have any questions?
May I begin the interview now?

SIGNATURE OF INTERVIEWER _____ DATE _____

RESPONDENT AGREES TO BE INTERVIEWED . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . 2 → END

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
102	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS . . . . . [ ][ ]	
104	Have you ever attended school?	YES . . . . . 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, "O" level, "A" level, tertiary or university?	PRIMARY . . . . . 1 "O" LEVEL . . . . . 2 "A" LEVEL . . . . . 3 TERTIARY . . . . . 4 UNIVERSITY 5	
106	What is the highest [CLASS/YEAR] you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	[CLASS/YEAR] . . . . . [ ][ ]	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
107	CHECK 105: PRIMARY OR "O" OR "A" LEVEL ↓	HIGHER ☐ → 110	
108	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PART OF THE SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE . . . . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
109	CHECK 108: CODE '2', '3' OR '4' CIRCLED ↓	CODE '1' OR '5' CIRCLED ☐ → 111	
110	Do you read a newspaper or magazine at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
111	Do you listen to the radio at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
112	Do you watch television at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
113	Do you own a mobile phone?	YES . . . . . 1 NO 2	→ 115
114	Is your mobile phone a smart phone?	YES . . . . . 1 NO 2	
115	Have you ever used the Internet from any location on any device?	YES . . . . . 1 NO 2	→ 118
116	In the last 12 months, have you used the Internet? IF NECESSARY, PROBE FOR USE FROM ANY LOCATION, WITH ANY DEVICE.	YES . . . . . 1 NO 2	→ 118
117	During the last one month, how often did you use the Internet: almost every day, at least once a week, less than once a week, or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
118	What is your religion?	NO RELIGION . . . . . 10 ANGLICAN . . . . . 11 CATHOLIC . . . . . 12 MUSLIM . . . . . 13 SEVENTH DAY ADVENTIST . . . . . 14 ORTHODOX . . . . . 15 PENTECOSTAL/BORN AGAIN/EVANGELICAL 16 BAHA'I . . . . . 17 BAPTIST . . . . . 18 JEWISH . . . . . 19 PRESBYTERIAN . . . . . 20 MAMMON . . . . . 21 HINDU . . . . . 22 BUDDHIST . . . . . 23 JEHOVAH'S WITNESS . . . . . 24 SALVATION ARMY . . . . . 25 TRADITIONAL . . . . . 26 OTHER _____ 96 (SPECIFY)	
119	What is your tribe?	TRIBE CODE . . . . . ☐☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	a) How many sons live with you? b) And how many daughters live with you? IF NONE, RECORD '00'.	a) SONS AT HOMI . . . . . [ ][ ] b) DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with	YES . . . . . 1 NO 2	→ 206
205	a) How many sons are alive but do not live with you? b) And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	a) SONS ELSEWHERE . . . . . [ ][ ] b) DAUGHTERS ELSEWHERE . . . . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried, who made any movement, sound, or effort to breathe, or who showed any other signs of life even if for a very short time?	YES . . . . . 1 NO 2	→ 208
207	a) How many boys have died? b) And how many girls have died? IF NONE, RECORD '00'.	a) BOYS DEAD . . . . . [ ][ ] b) GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL LIVE BIRTHS . . . . . [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐		→ 224
211	Now I'd like to ask you about your more recent births. How many births have you had in 2019-2024? RECORD NUMBER OF LIVE BIRTHS IN 2019-	TOTAL IN 2019-2024 . . . . . [ ][ ] NONE 00	→ 224

SECTION 2. REPRODUCTION

212	Now I would like to record the names of all your births in 2019-2024, whether still alive or not, starting with the most recent one you had. RECORD IN 213 THE NAMES OF ALL THE BIRTHS BORN IN 2019-2024. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS. IF THERE ARE MORE THAN 3 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE.

213 What name was given to your (most recent/ previous) baby? RECORD NAME. BIRTH HISTORY NUMBER.	214 Is (NAME) a boy or a girl?	215 Was (NAME) a single birth, a twin, or a triplet? IF MULTIPLE PREG-NANCY: COPY VALUE FOR 215 IN NEXT ROW(S).	216 On what day, month, and year was (NAME) born?	217 FOR ROW 01, ASK: Have you had any live births since the birth of (NAME OF MOST RECENT BIRTH), including any children who died after birth? AFTER ROW 01: IF 215=1 OR THIS IS THE LAST BIRTH OF A MULTIPLE PREGNANCY, ASK: Were there any other live births between (NAME) and (NAME OF FOLLOWING BIRTH), including any children who died after birth? IF 215 > 1 AND THIS IS NOT THE LAST BIRTH OF THE PREGNANCY, SKIP TO 213 IN NEXT ROW.	218 Is (NAME) still alive?	219 IF ALIVE: How old was (NAME) at (his/her) last birthday? RECORD AGE IN COMP-LETED YEARS.	220 IF ALIVE: Is (NAME) living with you?	221 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD. RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD .
01	BOY 1 GIRL 2	SING 1 TWINS 2 TRIP 3 NO. OF OUT-	DAY [ ][ ] MONTH [ ][ ] [ ][ ][ ][ ] YEAR	YES . . . . . 1 (ADD BIRTH) NO . . . . . 2 (GO TO 213 IN NEXT ROW)	YES 1 NO 2 (NEXT BIRTH)	AGE IN YEARS [ ][ ]	YES 1 NO 2	HOUSEHOLD LINE NUMBER [ ][ ]
02	BOY 1 GIRL 2	SING 1 TWINS 2 TRIP 3 NO. OF OUT-	DAY [ ][ ] MONTH [ ][ ] [ ][ ][ ][ ] YEAR	YES . . . . . 1 (ADD BIRTH) NO . . . . . 2 (GO TO 213 IN NEXT ROW)	YES 1 NO 2 (NEXT BIRTH)	AGE IN YEARS [ ][ ]	YES 1 NO 2	HOUSEHOLD LINE NUMBER [ ][ ]
03	BOY 1 GIRL 2	SING 1 TWINS 2 TRIP 3 NO. OF OUT-	DAY [ ][ ] MONTH [ ][ ] [ ][ ][ ][ ] YEAR	YES . . . . . 1 (ADD BIRTH) NO . . . . . 2 (GO TO 213 IN NEXT ROW)	YES 1 NO 2 (NEXT BIRTH)	AGE IN YEARS [ ][ ]	YES 1 NO 2	HOUSEHOLD LINE NUMBER [ ][ ]

217A	Did you have any other live births before the birth of (NAME) and during or after January 2019?	YES . . . . . 1 ⟶ ADD TO TABLE NO 2
217B	READ THE LIST OF LIVE BIRTHS IN ORDER TO THE RESPONDENT, STARTING FROM THE MOST RECENT BIRTH, AND ASK IF THEY ARE ALL THAT SHE HAS HAD IN OR SINCE JANUARY 2019, AND IF THEY ARE LISTED IN ORDER. DOES THE RESPONDENT AGREE? IF NOT, PROBE FOR THE CORRECT INFORMATION AND REVISE THE PREGNANCY HISTORY ACCORDINGLY. IF YES, PROCEED TO 218 ROW 1.	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
223	COMPARE 211 WITH NUMBER OF BIRTHS IN BIRTH HISTORY NUMBERS ARE THE SAME ☐ NUMBERS ARE DIFFERENT ☐ (PROBE AND RECONCILE)		
224	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	301
225	How many weeks or months pregnant are you? RECORD NUMBER OF COMPLETED WEEKS OR MONTHS.	WEEKS . . . . . 1 ☐☐ MONTHS . . . . . 2 ☐☐	

SECTION 3. PREGNANCY AND INTERMITTENT PREVENTIVE TREATMENT

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	CHECK 216 AND 218:	ONE OR MORE BIRTHS 0-35 MONTHS BEFORE THE SURVEY ☐ ↓	NO BIRTHS 0-35 MONTHS BEFORE THE SURVEY ☐ → 401
302	RECORD THE NAME OF THE MOST RECENT BIRTH FROM 213, LINE 01:	MOST RECENT BIRTH NAME _____	
303	Now I would like to ask you some questions about your last pregnancy that resulted in a live birth. While you were pregnant with (NAME), did you see anyone for antenatal care for this pregnancy?	YES . . . . . 1 NO 2	→ 308
304	Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	**HEALTH PERSONNEL** DOCTOR . . . . . A NURSE/MIDWIFE . . . . . B MEDICAL ASSISTANT/ CLINICAL OFFICER . . . . . C NURSING AIDE/ASSISTANT . . . . . D **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT . . . . . E COMMUNITY/VILLAGE HEALTH WORKER F OTHER _____ X (SPECIFY)	
305	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC, PRIVATE, OR NGO SECTOR, RECORD 'X' AND WRITE THE NAME OF THE PLACE(S).	**HOME** HER HOME . . . . . A OTHER HOME . . . . . B **PUBLIC SECTOR** GOVERNMENT HOSPITAL . . . . . C GOVERNMENT HEALTH CENTER . . . . . D OTHER PUBLIC SECTOR _____ E (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . . . F OTHER PRIVATE MEDICAL SECTOR _____ G (SPECIFY) OTHER _____ X (SPECIFY)	

SECTION 3. PREGNANCY AND INTERMITTENT PREVENTIVE TREATMENT

NO.	NAME OF CHILD _____	BIRTH HISTORY NUMBER ..... [ ][ ]	
306	How many weeks or months pregnant were you when you first received antenatal care for this pregnancy?	WEEKS ..... 1 [ ][ ] MONTHS ..... 2 [ ][ ] DON'T KNOW 998	
307	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES ..... [ ][ ] DON'T KNOW 98	
308	During this pregnancy, did you take SP/Fansidar to keep you from getting malaria?	YES ..... 1 NO ..... 2 DON'T KNOW 8	 → 310A → 401
309	How many times did you take SP/Fansidar during this pregnancy?	TIMES ..... [ ][ ]	
310	Did you get the SP/Fansidar during any antenatal care visit, during another visit to a health facility or from another source? IF MORE THAN ONE SOURCE, RECORD THE HIGHEST SOURCE ON THE LIST.	ANTENATAL VISIT ..... 1 ANOTHER FACILITY VISIT ..... 2 OTHER SOURCE 6	
310A	CHECK 308 AND 309: TOOK SP LESS THAN 3 TIMES DURING THIS PREGNANCY	CODE 2 in 308 ENTERED OR CODE '00' '01' OR '02' TIMES IN 309 ENTERED [ ] ↓ OTHER [ ] → 401	
310B	Why did you take (SP/Fansidar) less than three times during this pregnancy? RECORD ALL MENTIONED.	FACILITY TOO FAR ..... A HAD NO MONEY ..... B SIDE EFFECTS ..... C NOT AWARE HAD TO TAKE MORE ..... D DID NOT WANT TO TAKE ..... E NOT GIVEN ..... F NOT AVAILABLE ..... G TASTES/SMELLS BAD ..... H PROVIDER ATTITUDE ..... I OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	

SECTION 4. FEVER IN CHILDREN

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	CHECK 216, 217, AND 218 IN THE BIRTH HISTORY: ANY SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY? ONE OR MORE SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY ☐ NO SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY ☐		→ 501
402	Now I would like to ask some questions about the health of your children born in the last 5 years. (We will talk about each separately, starting with the youngest.)		
403	RECORD THE NAME AND BIRTH HISTORY NUMBER FROM 213 OF THE SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY, STARTING WITH THE LAST ONE. NAME OF CHILD _____	BIRTH HISTORY NUMBER ..... ☐☐	
404	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 415AA
405	At any time during the illness, did (NAME) have blood taken from (NAME)'s finger or heel for testing?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
406	Were you told by a healthcare provider that (NAME) had malaria?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
407	Did you seek advice or treatment for the illness from any source?	YES ..... 1 NO 2	→ 408
407A	Why have you not sought advice or treatment from any source?	CHILD JUST FELL ILL ..... A CHILD NOT VERY ILL ..... B CLINIC TOO FAR ..... C HAVE NO MONEY ..... D WAITING FOR CHILD'S FATHER ..... E DON'T KNOW WHAT TO DO ..... F ALREADY HAD MEDICINE AT HOME ..... G OTHER _____ (SPECIFY) X	→ 412

SECTION 4. FEVER IN CHILDREN

NO.	NAME OF CHILD _____	BIRTH HISTORY NUMBER ..... [ ][ ]	
408	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC, PRIVATE, OR NGO SECTOR, RECORD 'X' AND WRITE THE NAME OF THE PLACE(S).	**PUBLIC SECTOR** GOVERNMENT HOSPITAL ..... A GOVERNMENT HEALTH CENTER ..... B MOBILE CLINIC/OUTREACH ..... D COMMUNITY HEALTH WORKER/ VILLAGE HEALTH WORKER/TEAM ..... E OTHER PUBLIC SECTOR SECTOR _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC ..... G PHARMACY/DRUG SHOP ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J FIEDWORKER ..... K OTHER PRIVATE MEDICAL SECTOR _____ L (SPECIFY) **OTHER SOURCE** SHOP ..... Q TRADITIONAL PRACTITIONER ..... R MARKET ..... S HAWKER/ITINERANT DRUG SELLER .. T OTHER _____ X (SPECIFY)	
409	CHECK 408:	TWO OR MORE CODES CIRCLED [ ] ↓	ONLY ONE CODE CIRCLED [ ] → 411
410	Where did you first seek advice or treatment? USE LETTER CODE FROM 408.	FIRST PLACE ..... [ ]	
411	How many days after the illness began did you first seek advice or treatment for (NAME)? IF THE SAME DAY RECORD '00'.	DAYS ..... [ ][ ]	
412	At any time during the illness, did (NAME) take any medicine for the illness?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 415AA

SECTION 4. FEVER IN CHILDREN

NO.	NAME OF CHILD _____	BIRTH HISTORY NUMBER ..... [ ][ ]

413 (2)	What medicine did (NAME) take? Any other medicine? RECORD ALL MENTIONED. IF MEDICINE NOT KNOWN, ASK TO SEE THE PACKAGE OR PRESCRIPTION.	**ANTIMALARIAL MEDICINE** ARTEMISININ COMBINATION THERAPY (ACT) ..... A SP/FANSIDAR ..... B CHLOROQUINE ..... C AMODIAQUINE ..... D QUININE PILLS ..... E INJECTION/IV ..... F ARTESUNATE RECTAL ..... G INJECTION/IV ..... H OTHER ANTIMALARIAL _____ (SPECIFY) I **ANTIBIOTIC MEDICINE** AMOXICILLIN ..... J COTRIMOXAZOLE ..... K OTHER PILL/SYRUP ..... L OTHER INJECTION/IV ..... M **OTHER MEDICINE** ASPIRIN ..... N PARACETAMOL/PANADOL/ ACETAMINOPHEN ..... O IBUPROFEN ..... P OTHER _____ (SPECIFY) X DON'T KNOW ..... Z
414	CHECK 413: ARTEMISININ COMBINATION THERAPY ('A') GIVEN CODE 'A' CIRCLED [ ] ↓ CODE 'A' NOT CIRCLED [ ] → 415AA	
415	How long after the fever started did (NAME) first take an artemisinin combination therapy?	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER FEVER ..... 2 THREE OR MORE DAYS AFTER FEVER ..... 3 DON'T KNOW 8

SECTION 4. FEVER IN CHILDREN

NO.	NAME OF CHILD _____ BIRTH HISTORY NUMBER		
415AA	CHECK 216, 217, AND 219 IN THE BIRTH HISTORY: IS THIS THE **YOUNGEST**, SURVIVING CHILD, BORN 0-59 MONTHS BEFORE THE SURVEY? YES ☐ ↓ NO ☐ → 416		
415A	The Ugandan government is thinking about introducing additional programs to protect children from malaria. Have you heard about the new malaria vaccine?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
415B	Would you allow your (child/children) to be vaccinated against malaria if the vaccine became available in your area?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
415C	SP/Amodiaquine is a medicine given to prevent malaria. Would you allow your (child/children) to be given doses of SP/Amodiaquine after the rainy season to prevent the child from getting malaria?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
416	CHECK 216 AND 217 IN BIRTH HISTORY: ANY MORE SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY? NO MORE SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY ☐ ↓ MORE SURVIVING CHILDREN BORN 0-59 MONTHS BEFORE THE SURVEY ☐ → 403		

SECTION 5. MALARIA KNOWLEDGE AND BELIEFS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	In the last six months, have you seen or heard any messages about malaria?	YES . . . . . 1 NO 2	→ 503
502	Where did you see or hear these messages? PROBE: Anywhere else? RECORD ALL MENTIONED.	RADIO . . . . . A TELEVISION . . . . . B POSTER/BILLBOARD . . . . . C NEWSPAPER/MAGAZINE . . . . . D LEAFLET/BROCHURE . . . . . E HEALTHCARE PROVIDER . . . . . F COMMUNITY HEALTH WORKER/ VILLAGE HEALTH WORKER/TEAM . . . . . G SOCIAL MEDIA . . . . . H OTHER _____ X (SPECIFY) DON'T REMEMBER . . . . . Z	
503	Are there ways to avoid getting malaria?	YES . . . . . 1 NO 2	→ 505
504	What are the things that people can do to prevent themselves from getting malaria? RECORD ALL MENTIONED.	SLEEP UNDER A MOSQUITO NET . . . . . A SLEEP UNDER AN INSECTICIDE-TREATED MOSQUITO NET . . . . . B USE MOSQUITO REPELLENT . . . . . C TAKE PREVENTATIVE MEDICATIONS . . . . D SPRAY HOUSE WITH INSECTICIDE . . . . . E FILL IN STAGNANT WATERS (PUDDLES) . . F KEEP SURROUNDINGS CLEAN . . . . . G PUT MOSQUITO SCREEN ON WINDOWS . . H PROMPT TREATMENT TO PREVENT FURTHER TRANSMISSION . . . . . J OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
505	Now I am going to read some statements and I would like you to tell me whether you agree or disagree with each statement. If you don't know, say, don't know. People in this community only get malaria during the rainy season. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
506	When a child has a fever, you almost always worry it might be malaria. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
507	Getting malaria is not a problem because it can be easily treated. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	

SECTION 5. MALARIA KNOWLEDGE AND BELIEFS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
508	Only weak children can die from malaria. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
509	You can sleep under a mosquito net for the entire night when there are lots of mosquitoes. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
510	You can sleep under a mosquito net for the entire night when there are few mosquitoes Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
511	You do not like sleeping under a mosquito net when the weather is too warm. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
512	When a child has a fever, it is best to start by giving them any medicine you have at home. Do you agree or disagree?	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/UNCERTAIN 8	
513	People in your community usually take their children to a health care provider on the same day or day after they develop a fever. Do you agree or disagree? IF RESPONDENT DOESN'T KNOW, PROBE: Would you say more than half or less than half of the community does this?	AGREE/MORE THAN HALF . . . . . 1 DISAGREE/LESS THAN HALF . . . . . 2 DON'T KNOW/UNCERTAIN 8	
514	People in your community who have a mosquito net usually sleep under a mosquito net every night. Do you agree or disagree? IF RESPONDENT DOESN'T KNOW, PROBE: Would you say more than half or less than half of the community does this?	AGREE/MORE THAN HALF . . . . . 1 DISAGREE/LESS THAN HALF . . . . . 2 DON'T KNOW/UNCERTAIN 8	
515	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

FORMATTING DATE: 22 Apr 2024
ENGLISH LANGUAGE: 11 Apr 2023

2024 UGANDA MALARIA INDICATOR SURVEY
BIOMARKER QUESTIONNAIRE

UGANDA
NMCD/ UBOS

IDENTIFICATION

EA NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . [ ][ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ][ ]

HEALTH TECHNICIAN VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ]
HEALTH TECHNICIAN NAME	_____	_____	_____	MONTH [ ][ ] YEAR [ ][ ][ ][ ]
NEXT VISIT:DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		
NOTES:				TOTAL ELIGIBLE CHILDREN [ ][ ]

LANGUAGE OF QUESTIONNAIRE** [0][1] LANGUAGE OF INTERVIEW** [ ][ ] NATIVE LANGUAGE OF RESPONDENT** [ ][ ] TRANSLATOR (YES = 1, NO = 2) [ ]

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:

01 ENGLISH	04 LUGBARA	07 RUNYORO/RUTORO
02 LUGANDA	05 ATESO	08 KARAMAJONG
03 LUO	06 RUNYANKOLE/RUKIGA	09 LUSOGA
		96 OTHER

TEAM	TEAM SUPERVISOR	
[ ][ ] NUMBER	_____ NAME	

MALARIA TESTING FOR CHILDREN AGE 6 MONTHS TO 4 YEARS

101	CHECK CAPI OUTPUT FOR "LIST ELIGIBLE INDIVIDUALS/BIOMARKERS". RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN AGE 0-5 YEARS IN QUESTION 102 ON THIS PAGE.		
	CHILD 1		
102	CHECK CAPI OUTPUT AND RECORD NAME AND LINE NUMBER OF CHILD.	NAME _____ LINE NUMBER ..... [ ][ ]	
103	IF MOTHER INTERVIEWED: COPY CHILD'S DATE OF BIRTH (DAY, MONTH, AND YEAR) FROM PREGNANCY HISTORY. IF MOTHER NOT INTERVIEWED ASK: What is {NAME OF CHILD}'s date of birth?	DAY ..... [ ][ ] MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
104	IF MOTHER INTERVIEWED: COPY CHILD'S AGE FROM PREGNANCY HISTORY. IF MOTHER NOT INTERVIEWED ASK: How old was {NAME OF CHILD} at {NAME OF CHILD}'s last birthday? COMPARE AND CORRECT 103 AND/OR 104 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ]	
105	CHECK 104: CHILD AGE 0-4 YEARS?	YES [ ] ↓ NO [ ] →	135
117	CHECK 103: IS THE CHILD AGE 0-5 MONTHS OR IS THE CHILD OLDER?	OLDER [ ] ↓ AGE 0-5 MONTHS [ ] →	135

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118	RECORD NAME OF PARENT/RESPONSIBLE ADULT FOR THE CHILD.	NAME _____ LINE NUMBER..... [ ][ ]	
120	ASK CONSENT FOR MALARIA TEST FROM PARENT/RESPONSIBLE ADULT: As part of this survey, we are asking children all over the country to take a test to see if they have malaria. Malaria is a serious illness caused by a parasite transmitted by a mosquito bite. This survey will assist the government to develop programs to prevent and treat malaria. We ask that all children age 6 months through 4 years take part in malaria testing. The tests require a few drops of blood from a finger or heel. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for malaria immediately, and the results will be told to you right away. A few blood drops will be collected on slide(s) and filter paper and taken to a laboratory for testing. You will not be told the results of the laboratory testing. All results will be kept strictly confidential and will not be shared with anyone other than members of our survey team. PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING. Do you have any questions? You can say yes or no. It is up to you to decide. Will you allow {NAME OF CHILD} to be tested for malaria?	GRANTED ..... 1 REFUSED ..... 2 NOT PRESENT/OTHER 3	
121	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
122	CHECK 120:	CONSENT GRANTED [ ] ↓ CONSENT REFUSED OR NOT PRESENT/OTHER [ ] →	135

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122E	ASK CONSENT FOR ADDITIONAL TESTING FROM PARENT/RESPONSIBLE ADULT: We also ask you to allow the Ministry of Health to store part of the blood sample at the laboratory for additional tests or research. These include additional tests to learn more about malaria in children. The blood sample will not have any name or other data attached that could identify (NAME OF CHILD). If you do not want the blood sample stored for additional testing, (NAME OF CHILD) can still be tested for malaria. PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING. Do you have any questions? You can say yes or no. It is up to you to decide. Will you allow us to keep {NAME OF CHILD}'s blood sample stored for additional testing?	GRANTED . . . . . 1 REFUSED . . . . . 2 NOT PRESENT/OTHER 3	
122F	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
123	PREPARE EQUIPMENT AND SUPPLIES FOR THE TEST(S) AND PROCEED WITH TESTING. PLACE 1ST BAR CODE LABEL FOR MALARIA LAB TEST IN SPACE TO THE RIGHT. PUT THE 2ND BAR CODE LABEL ON THE SLIDE, THE 3RD ON THE TRANSMITTAL SHEET FOR THE SLIDES, THE 4TH ON THE DBS CARD, AND THE 5TH ON THE TRANSMITTAL SHEET FOR THE DBS CARDS.	PUT THE 1ST BAR CODE LABEL HERE. REFUSED . . . . . 99995 OTHER 99996	→ 135
123A	CHECK ADDITIONAL TESTING CONSENT STATUS: CHECK 122E	CONSENT REFUSED OR NOT PRESENT ☐ ↓ CONSENT GRANTED ☐	→ 124
123B	IF CONSENT REFUSED OR NOT PRESENT, WRITE **"NAT"** (NO ADDITIONAL TEST) ON THE FILTER PAPER.		
124	CONDUCT TEST AND RECORD RESULT OF THE MALARIA RDT HERE AND IN THE INFORMATIONAL PAMPHLET.	TEST POSITIVE . . . . . 1 TEST NEGATIVE . . . . . 2 NOT PRESENT . . . . . 4 REFUSED . . . . . 5 OTHER 6	→ 135
125	Does {NAME OF CHILD} suffer from any of the following illnesses or symptoms: a) Extreme weakness? b) Heart problems? c) Loss of consciousness? d) Rapid or difficult breathing? e) Seizures? f) Abnormal bleeding? g) Jaundice or yellow skin? h) Dark urine?	YES NO a) EXTREME WEAKNESS 1 2 b) HEART PROBLEMS 1 2 c) LOSS OF CONSCIOUS 1 2 d) RAPID BREATHING 1 2 e) SEIZURES . . . . . 1 2 f) BLEEDING . . . . . 1 2 g) JAUNDICE . . . . . 1 2 h) DARK URINE 1 2	
126	CHECK 125: ANY 'YES' CIRCLED?	YES ☐ ↓ NO ☐	→ 128

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
127	SEVERE MALARIA REFERRAL The malaria test shows that {NAME OF CHILD} has malaria. Your child also has symptoms of severe malaria. The malaria treatment I have will not help your child, and I cannot give you the medication. Your child is very ill and must be taken to a health facility right away. RECORD THE RESULT OF THE MALARIA RDT ON THE REFERRAL FORM.	SEVERE MALARIA REFERRAL PROVIDED . . . . . 1 SEVERE MALARIA REFERRAL NOT PROVIDED 2	→135
128	In the past 2 weeks has {NAME OF CHILD} taken or is {NAME OF CHILD} taking Artemether/Lumefantrine (Coartem) given by a doctor or health center to treat the malaria? VERIFY BY ASKING TO SEE TREATMENT.	YES . . . . . 1 NO 2	→131
129	ALREADY TAKING Artemether/Lumefantrine REFERRAL STATEMENT You have told me that {NAME OF CHILD} had already received Artemether/ Lumefantrine for malaria. Therefore, I cannot give you additional Artemether/Lumefantrine. However, the test shows that he/she has malaria. If your child has a fever for 2 days after the last dose of Artemether/Lumefantrine, you should take the child to the nearest health facility for further examination.		
130	CHECK 128: NO ☐ ↓ YES ☐		→135
131	ASK CONSENT FOR MALARIA TREATMENT FROM PARENT/RESPONSIBLE ADULT: The malaria test shows that {NAME OF CHILD} has malaria. We can give you free medicine. The medicine is called Artemether/ Lumefantrine. Artemether/Lumefantrine is very effective and in a few days it should get rid of the fever and other symptoms. You do not have to give {NAME OF CHILD} the medicine. This is up to you. Please tell me whether you accept the medicine or not.	ACCEPTED MEDICINE . . . 1 REFUSED MEDICINE . . . . . 2 OTHER 6	
132	RECORD HEALTH TECHNICIAN NAME.	_____ HEALTH TECHNICIAN NAME	
133	CHECK 131: ACCEPTED MEDICINE? ACCEPTED MEDICINE ☐ ↓ REFUSED MEDICINE OR OTHER ☐		→135
134	PROVIDE DOSAGE INSTRUCTIONS TO PARENT/RESPONSIBLE ADULT. TELL THE PARENT/RESPONSIBLE ADULT: If {NAME OF CHILD} has a high fever, fast or difficult breathing, is not able to drink or breastfeed, gets sicker or does not get better in 2 days, you should take him/her to a health professional for treatment right away.		
135	RECORD DATE:	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
136	IF ANOTHER CHILD IN HOUSEHOLD IS ELIGIBLE, GO TO 102 ON THE NEXT PAGE; IF NO MORE CHILDREN END INTERVIEW		

Category of the body weight of the patients in kg.	**Artemether (20mg) + Lumefantrine (120mg)**	**Number of tablets of AL per dose**					
		Day 1		**Day 2**		**Day 3**	
	Blisters	**1st dose**	**8 hrs after**	**24 hrs after**	**36 hrs after**	**48 hrs after**	**60 hrs after**
5-14 kg (4 months up to 3 yrs)	6 x 1	1	1	1	1	1	1
15 kg to < 25 kg (from 3 yrs- 7 yrs)	6 x 2	2	2	2	2	2	2
25 kg to < 35 kg	6 x 3	3	3	3	3	3	3
≥ 35 kg	6 x 4	4	4	4	4	4	4

MALARIA TESTING FOR CHILDREN AGE 6 MONTHS TO 4 YEARS

101	CHECK CAPI OUTPUT FOR "LIST ELIGIBLE INDIVIDUALS/BIOMARKERS". RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN AGE 0-5 YEARS IN QUESTION 102 ON THIS PAGE.		
	CHILD 2		
102	CHECK CAPI OUTPUT AND RECORD NAME AND LINE NUMBER OF CHILD.	NAME _____ LINE NUMBER ..... [ ][ ]	
103	IF MOTHER INTERVIEWED: COPY CHILD'S DATE OF BIRTH (DAY, MONTH, AND YEAR) FROM PREGNANCY HISTORY. IF MOTHER NOT INTERVIEWED ASK: What is {NAME OF CHILD}'s date of birth?	DAY ..... [ ][ ] MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
104	IF MOTHER INTERVIEWED: COPY CHILD'S AGE FROM PREGNANCY HISTORY. IF MOTHER NOT INTERVIEWED ASK: How old was {NAME OF CHILD} at {NAME OF CHILD}'s last birthday? COMPARE AND CORRECT 103 AND/OR 104 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ]	
105	CHECK 104: CHILD AGE 0-4 YEARS?	YES [ ] ↓ NO [ ] →	135
117	CHECK 103: IS THE CHILD AGE 0-5 MONTHS OR IS THE CHILD OLDER?	OLDER [ ] ↓ AGE 0-5 MONTHS [ ] →	135

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118	RECORD NAME OF PARENT/RESPONSIBLE ADULT FOR THE CHILD.	NAME _____ LINE NUMBER..... [ ][ ]	
120	ASK CONSENT FOR MALARIA TEST FROM PARENT/RESPONSIBLE ADULT: As part of this survey, we are asking children all over the country to take a test to see if they have malaria. Malaria is a serious illness caused by a parasite transmitted by a mosquito bite. This survey will assist the government to develop programs to prevent and treat malaria. We ask that all children age 6 months through 4 years take part in malaria testing. The tests require a few drops of blood from a finger or heel. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for malaria immediately, and the results will be told to you right away. A few blood drops will be collected on slide(s) and filter paper and taken to a laboratory for testing. You will not be told the results of the laboratory testing. All results will be kept strictly confidential and will not be shared with anyone other than members of our survey team. PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING. Do you have any questions? You can say yes or no. It is up to you to decide. Will you allow {NAME OF CHILD} to be tested for malaria?	GRANTED ..... 1 REFUSED ..... 2 NOT PRESENT/OTHER 3	
121	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
122	CHECK 120:	CONSENT GRANTED [ ] ↓ CONSENT REFUSED OR NOT PRESENT/OTHER [ ] →	135

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122E	ASK CONSENT FOR ADDITIONAL TESTING FROM PARENT/RESPONSIBLE ADULT: We also ask you to allow the Ministry of Health to store part of the blood sample at the laboratory for additional tests or research. These include additional tests to learn more about malaria in children. The blood sample will not have any name or other data attached that could identify (NAME OF CHILD). If you do not want the blood sample stored for additional testing, (NAME OF CHILD) can still be tested for malaria. PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING. Do you have any questions? You can say yes or no. It is up to you to decide. Will you allow us to keep {NAME OF CHILD}'s blood sample stored for additional testing?	GRANTED . . . . . 1 REFUSED . . . . . 2 NOT PRESENT/OTHER 3	
122F	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
123	PREPARE EQUIPMENT AND SUPPLIES FOR THE TEST(S) AND PROCEED WITH TESTING. PLACE 1ST BAR CODE LABEL FOR MALARIA LAB TEST IN SPACE TO THE RIGHT. PUT THE 2ND BAR CODE LABEL ON THE SLIDE, THE 3RD ON THE TRANSMITTAL SHEET FOR THE SLIDES, THE 4TH ON THE DBS CARD, AND THE 5TH ON THE TRANSMITTAL SHEET FOR THE DBS CARDS.	PUT THE 1ST BAR CODE LABEL HERE. REFUSED . . . . . 99995 OTHER 99996	→ 135
123A	CHECK ADDITIONAL TESTING CONSENT STATUS: CHECK 122E	CONSENT REFUSED OR NOT PRESENT ☐ ↓ CONSENT GRANTED ☐	→ 124
123B	IF CONSENT REFUSED OR NOT PRESENT, WRITE **"NAT"** (NO ADDITIONAL TEST) ON THE FILTER PAPER.		
124	CONDUCT TEST AND RECORD RESULT OF THE MALARIA RDT HERE AND IN THE INFORMATIONAL PAMPHLET.	TEST POSITIVE . . . . . 1 TEST NEGATIVE . . . . . 2 NOT PRESENT . . . . . 4 REFUSED . . . . . 5 OTHER 6	→ 135
125	Does {NAME OF CHILD} suffer from any of the following illnesses or symptoms: a) Extreme weakness? b) Heart problems? c) Loss of consciousness? d) Rapid or difficult breathing? e) Seizures? f) Abnormal bleeding? g) Jaundice or yellow skin? h) Dark urine?	YES NO a) EXTREME WEAKNESS 1 2 b) HEART PROBLEMS 1 2 c) LOSS OF CONSCIOUS 1 2 d) RAPID BREATHING 1 2 e) SEIZURES . . . . . 1 2 f) BLEEDING . . . . . 1 2 g) JAUNDICE . . . . . 1 2 h) DARK URINE 1 2	
126	CHECK 125: ANY 'YES' CIRCLED?	YES ☐ ↓ NO ☐	→ 128

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
127	SEVERE MALARIA REFERRAL The malaria test shows that {NAME OF CHILD} has malaria. Your child also has symptoms of severe malaria. The malaria treatment I have will not help your child, and I cannot give you the medication. Your child is very ill and must be taken to a health facility right away. RECORD THE RESULT OF THE MALARIA RDT ON THE REFERRAL FORM.	SEVERE MALARIA REFERRAL PROVIDED . . . . . 1 SEVERE MALARIA REFERRAL NOT PROVIDED 2	→135
128	In the past 2 weeks has {NAME OF CHILD} taken or is {NAME OF CHILD} taking Artemether/Lumefantrine (Coartem) given by a doctor or health center to treat the malaria? VERIFY BY ASKING TO SEE TREATMENT.	YES . . . . . 1 NO 2	→131
129	ALREADY TAKING Artemether/Lumefantrine REFERRAL STATEMENT You have told me that {NAME OF CHILD} had already received Artemether/ Lumefantrine for malaria. Therefore, I cannot give you additional Artemether/Lumefantrine. However, the test shows that he/she has malaria. If your child has a fever for 2 days after the last dose of Artemether/Lumefantrine, you should take the child to the nearest health facility for further examination.		
130	CHECK 128: NO ☐ YES ☐		→135
131	ASK CONSENT FOR MALARIA TREATMENT FROM PARENT/RESPONSIBLE ADULT: The malaria test shows that {NAME OF CHILD} has malaria. We can give you free medicine. The medicine is called Artemether/ Lumefantrine. Artemether/Lumefantrine is very effective and in a few days it should get rid of the fever and other symptoms. You do not have to give {NAME OF CHILD} the medicine. This is up to you. Please tell me whether you accept the medicine or not.	ACCEPTED MEDICINE . . . 1 REFUSED MEDICINE . . . . . 2 OTHER 6	
132	RECORD HEALTH TECHNICIAN NAME.	_____ HEALTH TECHNICIAN NAME	
133	CHECK 131: ACCEPTED MEDICINE? ACCEPTED MEDICINE ☐ REFUSED MEDICINE OR OTHER ☐		→135
134	PROVIDE DOSAGE INSTRUCTIONS TO PARENT/RESPONSIBLE ADULT. TELL THE PARENT/RESPONSIBLE ADULT: If {NAME OF CHILD} has a high fever, fast or difficult breathing, is not able to drink or breastfeed, gets sicker or does not get better in 2 days, you should take him/her to a health professional for treatment right away.		
135	RECORD DATE:	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
136	IF ANOTHER CHILD IN HOUSEHOLD IS ELIGIBLE, GO TO 102 ON THE NEXT PAGE; IF NO MORE CHILDREN END INTERVIEW		

Category of the body weight of the patients in kg.	**Artemether (20mg) + Lumefantrine (120mg)**	**Number of tablets of AL per dose**					
		Day 1		**Day 2**		**Day 3**	
	Blisters	**1st dose**	**8 hrs after**	**24 hrs after**	**36 hrs after**	**48 hrs after**	**60 hrs after**
5-14 kg (4 months up to 3 yrs)	6 x 1	1	1	1	1	1	1
15 kg to < 25 kg (from 3 yrs- 7 yrs)	6 x 2	2	2	2	2	2	2
25 kg to < 35 kg	6 x 3	3	3	3	3	3	3
≥ 35 kg	6 x 4	4	4	4	4	4	4

MALARIA TESTING FOR CHILDREN AGE 6 MONTHS TO 4 YEARS

101	CHECK CAPI OUTPUT FOR "LIST ELIGIBLE INDIVIDUALS/BIOMARKERS". RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN AGE 0-5 YEARS IN QUESTION 102 ON THIS PAGE.		
	CHILD 3		
102	CHECK CAPI OUTPUT AND RECORD NAME AND LINE NUMBER OF CHILD.	NAME _____ LINE NUMBER ..... [ ][ ]	
103	IF MOTHER INTERVIEWED: COPY CHILD'S DATE OF BIRTH (DAY, MONTH, AND YEAR) FROM PREGNANCY HISTORY. IF MOTHER NOT INTERVIEWED ASK: What is {NAME OF CHILD}'s date of birth?	DAY ..... [ ][ ] MONTH ..... [ ][ ] YEAR ..... [ ][ ][ ][ ]	
104	IF MOTHER INTERVIEWED: COPY CHILD'S AGE FROM PREGNANCY HISTORY. IF MOTHER NOT INTERVIEWED ASK: How old was {NAME OF CHILD} at {NAME OF CHILD}'s last birthday? COMPARE AND CORRECT 103 AND/OR 104 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ]	
105	CHECK 104: CHILD AGE 0-4 YEARS?	YES [ ] NO [ ] → 135	
117	CHECK 103: IS THE CHILD AGE 0-5 MONTHS OR IS THE CHILD OLDER?	OLDER [ ] AGE 0-5 MONTHS [ ] → 135	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118	RECORD NAME OF PARENT/RESPONSIBLE ADULT FOR THE CHILD.	NAME _____ LINE NUMBER..... [ ][ ]	
120	ASK CONSENT FOR MALARIA TEST FROM PARENT/RESPONSIBLE ADULT: As part of this survey, we are asking children all over the country to take a test to see if they have malaria. Malaria is a serious illness caused by a parasite transmitted by a mosquito bite. This survey will assist the government to develop programs to prevent and treat malaria. We ask that all children age 6 months through 4 years take part in malaria testing. The tests require a few drops of blood from a finger or heel. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for malaria immediately, and the results will be told to you right away. A few blood drops will be collected on slide(s) and filter paper and taken to a laboratory for testing. You will not be told the results of the laboratory testing. All results will be kept strictly confidential and will not be shared with anyone other than members of our survey team. PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING. Do you have any questions? You can say yes or no. It is up to you to decide. Will you allow {NAME OF CHILD} to be tested for malaria?	GRANTED ..... 1 REFUSED ..... 2 NOT PRESENT/OTHER 3	
121	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
122	CHECK 120:	CONSENT GRANTED [ ] CONSENT REFUSED OR NOT PRESENT/OTHER [ ] → 135	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122E	ASK CONSENT FOR ADDITIONAL TESTING FROM PARENT/RESPONSIBLE ADULT: We also ask you to allow the Ministry of Health to store part of the blood sample at the laboratory for additional tests or research. These include additional tests to learn more about malaria in children. The blood sample will not have any name or other data attached that could identify (NAME OF CHILD). If you do not want the blood sample stored for additional testing, (NAME OF CHILD) can still be tested for malaria. PROVIDE LONG-FORM CONSENT STATEMENT AND READ THROUGH IT WITH RESPONDENT. ANSWER ANY QUESTIONS THEY HAVE AND OBTAIN SIGNED CONSENT BEFORE PROCEEDING. Do you have any questions? You can say yes or no. It is up to you to decide. Will you allow us to keep {NAME OF CHILD}'s blood sample stored for additional testing?	GRANTED . . . . . 1 REFUSED . . . . . 2 NOT PRESENT/OTHER 3	
122F	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
123	PREPARE EQUIPMENT AND SUPPLIES FOR THE TEST(S) AND PROCEED WITH TESTING. PLACE 1ST BAR CODE LABEL FOR MALARIA LAB TEST IN SPACE TO THE RIGHT. PUT THE 2ND BAR CODE LABEL ON THE SLIDE, THE 3RD ON THE TRANSMITTAL SHEET FOR THE SLIDES, THE 4TH ON THE DBS CARD, AND THE 5TH ON THE TRANSMITTAL SHEET FOR THE DBS CARDS.	PUT THE 1ST BAR CODE LABEL HERE. REFUSED . . . . . 99995 OTHER 99996	→ 135
123A	CHECK 122E: ADDITIONAL TESTING CONSENT STATUS:	CONSENT REFUSED OR NOT PRESENT ☐ ↓ CONSENT GRANTED ☐	→ 124
123B	IF CONSENT REFUSED OR NOT PRESENT, WRITE **"NAT"** (NO ADDITIONAL TEST) ON THE FILTER PAPER.		
124	CONDUCT TEST AND RECORD RESULT OF THE MALARIA RDT HERE AND IN THE INFORMATIONAL PAMPHLET.	TEST POSITIVE . . . . . 1 TEST NEGATIVE . . . . . 2 NOT PRESENT . . . . . 4 REFUSED . . . . . 5 OTHER 6	→ 135
125	Does {NAME OF CHILD} suffer from any of the following illnesses or symptoms: a) Extreme weakness? b) Heart problems? c) Loss of consciousness? d) Rapid or difficult breathing? e) Seizures? f) Abnormal bleeding? g) Jaundice or yellow skin? h) Dark urine?	YES NO a) EXTREME WEAKNESS 1 2 b) HEART PROBLEMS 1 2 c) LOSS OF CONSCIOUS 1 2 d) RAPID BREATHING 1 2 e) SEIZURES . . . . . 1 2 f) BLEEDING . . . . . 1 2 g) JAUNDICE . . . . . 1 2 h) DARK URINE 1 2	
126	CHECK 125: ANY 'YES' CIRCLED?	YES ☐ ↓ NO ☐	→ 128

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
127	SEVERE MALARIA REFERRAL The malaria test shows that {NAME OF CHILD} has malaria. Your child also has symptoms of severe malaria. The malaria treatment I have will not help your child, and I cannot give you the medication. Your child is very ill and must be taken to a health facility right away. RECORD THE RESULT OF THE MALARIA RDT ON THE REFERRAL FORM.	SEVERE MALARIA REFERRAL PROVIDED . . . . . 1 SEVERE MALARIA REFERRAL NOT PROVIDED 2	→135
128	In the past 2 weeks has {NAME OF CHILD} taken or is {NAME OF CHILD} taking Artemether/Lumefantrine (Coartem) given by a doctor or health center to treat the malaria? VERIFY BY ASKING TO SEE TREATMENT.	YES . . . . . 1 NO 2	→131
129	ALREADY TAKING Artemether/Lumefantrine REFERRAL STATEMENT You have told me that {NAME OF CHILD} had already received Artemether/ Lumefantrine for malaria. Therefore, I cannot give you additional Artemether/Lumefantrine. However, the test shows that he/she has malaria. If your child has a fever for 2 days after the last dose of Artemether/Lumefantrine, you should take the child to the nearest health facility for further examination.		
130	CHECK 128: NO ☐ ↓ YES ☐		→135
131	ASK CONSENT FOR MALARIA TREATMENT FROM PARENT/RESPONSIBLE ADULT: The malaria test shows that {NAME OF CHILD} has malaria. We can give you free medicine. The medicine is called Artemether/ Lumefantrine. Artemether/Lumefantrine is very effective and in a few days it should get rid of the fever and other symptoms. You do not have to give {NAME OF CHILD} the medicine. This is up to you. Please tell me whether you accept the medicine or not.	ACCEPTED MEDICINE . . . 1 REFUSED MEDICINE . . . . . 2 OTHER 6	
132	RECORD HEALTH TECHNICIAN NAME.	_____ (SIGN) _____ HEALTH TECHNICIAN NAME	
133	CHECK 131: ACCEPTED MEDICINE? ACCEPTED MEDICINE ☐ ↓ REFUSED MEDICINE OR OTHER ☐		→135
134	PROVIDE DOSAGE INSTRUCTIONS TO PARENT/RESPONSIBLE ADULT. TELL THE PARENT/RESPONSIBLE ADULT: If {NAME OF CHILD} has a high fever, fast or difficult breathing, is not able to drink or breastfeed, gets sicker or does not get better in 2 days, you should take him/her to a health professional for treatment right away.		
135	RECORD DATE:	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
136	IF ANOTHER CHILD IN HOUSEHOLD IS ELIGIBLE, GO TO 102 ON THE NEXT PAGE; IF NO MORE CHILDREN END INTERVIEW		

Category of the body weight of the patients in kg.	**Artemether (20mg) + Lumefantrine (120mg)**	**Number of tablets of AL per dose**					
		Day 1		**Day 2**		**Day 3**	
	Blisters	**1st dose**	**8 hrs after**	**24 hrs after**	**36 hrs after**	**48 hrs after**	**60 hrs after**
5-14 kg (4 months up to 3 yrs)	6 x 1	1	1	1	1	1	1
15 kg to < 25 kg (from 3 yrs- 7 yrs)	6 x 2	2	2	2	2	2	2
25 kg to < 35 kg	6 x 3	3	3	3	3	3	3
≥ 35 kg	6 x 4	4	4	4	4	4	4

FIELDWORKER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING BIOMARKERS

SUPERVISOR'S OBSERVATIONS

CONSENT FORMS

2024 Uganda Malaria Indicator Survey (UMIS)
Consent for Household Questionnaire

Project Title:	2024 Uganda Malaria Indicator Survey
Funding Source:	United States Agency for International Development President's Malaria Initiative (USAID/PMI), The Government of Uganda, and the Global Fund to Fight Against Aids, Malaria and Tuberculosis (GFATM)
Site of Research:	Randomly selected clusters across Uganda
Principal Investigators:	Dr. Jimmy Opigo, Dr. Bosco Agaba
Version number:	2.0
Version date:	19 November 2024

SURVEY SUMMARY
The Ministry of Health and the Uganda Bureau of Statistics are currently conducting the 2024 Malaria Indicator Survey across Uganda. The information collected will assist the government in planning health services effectively. Your household was randomly selected to participate in this survey, which typically takes about 10 to 20 minutes to complete.

All of your responses will be kept confidential and will only be accessible to our survey team. Participation in this survey is voluntary, and we highly value your input. If you prefer not to answer any question, please inform us, and we will move on to the next one. You may also stop the interview at any time.

This consent form provides detailed information about the study. You are welcome to ask questions at any point. After this consent form has been read to you and your questions have been answered, you can decide whether to participate in the study.

PROCEDURES
If you agree to participate in this survey, the following will happen:

a. After the consent form is signed, a survey team member will ask you questions about your household. The questions will take 10 to 20 minutes.

b. If there are any women age 15-49 living in or visiting your household, we will ask for their consent to interview them. Any women age 15-17 will also require parent/responsible adult consent to be interviewed.

c. If there are any children age 6 months to 4 years living in or visiting your household, they may be eligible for malaria testing. If eligible, we will ask their parent/responsible adult for consent to test them for malaria.

VOLUNTARY PARTICIPATION
Your participation in this survey is your choice. You may choose either to take part or not to take part. If agree to participate, you can refuse to answer any question that makes you uncomfortable or stop the interview at any time.

DISCOMFORT AND RISKS

- **Questionnaires:** Answering some questions may make you feel uncomfortable. You may refuse to answer any question or stop the interview at any time. This will not result in any penalty or disadvantage to you.

- **Confidentiality:** Other people may learn that you are part of this survey. However, we will not allow people who are not working for the survey to see any of your responses.

BENEFITS

If you agree to take part in the survey, the information we collect will help Uganda and other countries to decide on the how to design and implement more effective control programs to protect people against malaria.

COMPENSATION

No. Your participation in this survey is voluntary. But we hope that you participate since your involvement will allow us to learn more about malaria in Uganda and improve malaria programs and interventions.

CONFIDENTIALITY STATEMENT

The records concerning your participation are to be used only for the purpose of this survey. Your name will not be used on any study forms or labels on laboratory specimens or in any report resulting from this survey. At the beginning of the survey, we will assign you an identification number and this number will be used on the forms and on the laboratory specimens. Any information obtained in connection with this survey will be kept strictly confidential. Only members of the study team will have access to information linking your name with their ID number. All personal identifying information will be deleted from the data set after all data has been collected.

FREEDOM TO WITHDRAW FROM THE SURVEY

Taking part in this survey is a choice. You may choose to answer our questions or not. If you decide to take part in the survey, you may stop the interview at any time. No matter what decision you make, there will be no penalty to you.

QUESTIONS ABOUT THE SURVEY

For questions about the survey, you may call the principal investigator, Dr. Jimmy Opigo and his staff, at 0772962601. You may also call Dr. Agaba Bosco at 0772902105. We will give you free access to a telephone line.

QUESTIONS ABOUT YOUR RIGHTS AS A RESEARCH PARTICIPANT

For questions about your rights as a research participant or research related harm, you may contact Mr. Tom Lakwo the chair of the Vector Control Division Research and Ethics Committee at telephone number 0772438311 which approved this study.

HOUSEHOLD QUESTIONNAIRE CONSENT FORM—RESPONDENT COPY

PARTICIPANT STATEMENT

I have been informed verbally and in writing about this survey and understand what is involved. I also know whom to contact if I need more information. I understand that confidentiality will be preserved. I understand that l am free to withdraw my participation from the survey at any time without penalty. I agree to be interviewed and will be given a copy of this information sheet to keep.

Please put your initials in the "YES" or "NO" box to indicate your answer.

I choose to be interviewed.

YES	*NO*

Name of Person Providing Consent (printed)

Signature or Fingerprint of Person Providing Consent — Date

Name of Survey Staff Administering Consent (printed) — Position/Title

Signature of Survey Staff Administering Consent — Date

* If the participant is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the participant, and after they have orally consented to their participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the participant, and that informed consent was freely given by the patient.

Name of Person Witnessing Consent (printed)

Signature of Witness — Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga

O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong

O No Translation provided (respondent can read English)

HOUSEHOLD QUESTIONNAIRE CONSENT FORM— UBOS/NMCD COPY

PARTICIPANT STATEMENT

I have been informed verbally and in writing about this survey and understand what is involved. I also know whom to contact if I need more information. I understand that confidentiality will be preserved. I understand that l am free to withdraw my participation from the survey at any time without penalty. I agree to be interviewed and will be given a copy of this information sheet to keep.

Please put your initials in the "YES" or "NO" box to indicate your answer.

I choose to be interviewed.

YES	*NO*

Name of Person Providing Consent (printed)

Signature or Fingerprint of Person Providing Consent Date

Name of Survey Staff Administering Consent (printed) Position/Title

Signature of Survey Staff Administering Consent Date

* If the participant is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the participant, and after they have orally consented to their participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the participant, and that informed consent was freely given by the patient.

Name of Person Witnessing Consent (printed)

Signature of Witness Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga

O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong

O No Translation provided (respondent can read English)

2024 Uganda Malaria Indicator Survey (UMIS)
Consent for Woman's Questionnaire

Project Title:	2024 Uganda Malaria Indicator Survey
Funding Source:	United States Agency for International Development President's Malaria Initiative (USAID/PMI), The Government of Uganda, and the Global Fund to Fight Against Aids, Malaria and Tuberculosis (GFATM)
Site of Research:	Randomly selected clusters across Uganda
Principal Investigators:	Dr. Jimmy Opigo, Dr. Bosco Agaba
Version number:	2.0
Version date:	19 November 2024

SURVEY SUMMARY
The Ministry of Health and the Uganda Bureau of Statistics are currently conducting the 2024 Malaria Indicator Survey across Uganda. The information collected will assist the government in planning health services effectively. Your household was randomly selected to participate in this survey, which typically takes about 10 to 20 minutes to complete.

All of your responses will be kept confidential and will only be accessible to our survey team. Participation in this survey is voluntary, and we highly value your input. If you prefer not to answer any question, please inform us, and we will move on to the next one. You may also stop the interview at any time.

This consent form provides detailed information about the study. You are welcome to ask questions at any point. After this consent form has been read to you and your questions have been answered, you can decide whether to participate in the study.

PROCEDURES
If you agree to participate in this survey, the following will happen:

After the consent form is signed, a survey team member will ask you questions about you, your children, and your malaria-related knowledge and practices. The questions will take 10 to 20 minutes.

If you have any children age 6 months to 4 years, they may be eligible for malaria testing. If eligible, we will ask your consent to test them for malaria.

VOLUNTARY PARTICIPATION
Your participation in this survey is your choice. You may choose either to take part or not to take part. If agree to participate, you can refuse to answer any question that makes you uncomfortable or stop the interview at any time.

DISCOMFORT AND RISKS

- **Questionnaires:** Answering some questions may make you feel uncomfortable. You may refuse to answer any question or stop the interview at any time. This will not result in any penalty or disadvantage to you.

- **Confidentiality:** Other people may learn that you are part of this survey. However, we will not allow people who are not working for the survey to see any of your responses.

BENEFITS
If you agree to take part in the survey, the information we collect will help Uganda and other countries to decide on the how to design and implement more effective control programs to protect people against malaria.

COMPENSATION
You will not receive any compensation for participating in this survey. Your participation is voluntary. But we hope that you participate since your involvement will allow us to learn more about malaria in Uganda and improve malaria programs and interventions.

CONFIDENTIALITY STATEMENT
The records concerning your participation are to be used only for the purpose of this survey. Your name will not be used on any study forms or labels on laboratory specimens or in any report resulting from this survey. At the beginning of the survey, we will assign you an identification number and this number will be used on the forms and on the laboratory specimens. Any information obtained in connection with this survey will be kept strictly confidential. Only members of the study team will have access to information linking your name with their ID number. All personal identifying information will be deleted from the data set after all data has been collected.

FREEDOM TO WITHDRAW FROM THE SURVEY
Taking part in this survey is a choice. You may choose to answer our questions or not. If you decide to take part in the survey, you may stop the interview at any time. No matter what decision you make, there will be no penalty to you.

QUESTIONS ABOUT THE SURVEY
For questions about the survey, you may call the principal investigator, Dr. Jimmy Opigo, and his staff at 0772962601. You may also call Dr. Agaba Bosco at 0772902105. We will give you free access to a telephone line.

QUESTIONS ABOUT YOUR RIGHTS AS A RESEARCH PARTICIPANT
For questions about your rights as a research participant or research related harm, you may contact Mr. Tom Lakwo, the chair of the Vector Control Division Research and Ethics Committee, at telephone number 0772438311, which approved this study.

WOMAN'S CONSENT—INDIVIDUAL INTERVIEW—RESPONDENT COPY

PARTICIPANT STATEMENT
I have been informed verbally and in writing about this survey and understand what is involved. I also know whom to contact if I need more information. I understand that confidentiality will be preserved. I understand that l am free to withdraw my participation from the survey at any time without penalty. I agree to be interviewed and will be given a copy of this information sheet to keep.

Please put your initials in the "YES" or "NO" box to indicate your answer.

I choose to be interviewed.

YES	*NO*

Name of Parent/ Responsible Adult Providing Consent (printed)
** Only required if respondent is age 15–17*

Signature or Fingerprint of Parent/ Responsible Adult Providing Consent Date
** Only required if respondent is age 15–17*

Name of Participant (printed)

Signature or Fingerprint of Participant Date
(woman 18+ providing consent/woman 15–17 providing assent)

Name of Survey Staff Administering Consent (printed) Position/Title

Signature of Survey Staff Administering Consent Date

* If the participant is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the participant, and after they have orally consented to their participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the participant, and that informed consent was freely given by the patient.

Name of Person Witnessing Consent (printed)

Signature of Witness Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga
O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong
O No Translation provided (respondent can read English)

UMIS WOMAN'S CONSENT– NMCD/UBOS COPY

Household Number: _____

Cluster Number: _____

PARTICIPANT STATEMENT

I have been informed verbally and in writing about this survey and understand what is involved. I also know whom to contact if I need more information. I understand that confidentiality will be preserved. I understand that l am free to withdraw my participation from the survey at any time without penalty. I agree to be interviewed and will be given a copy of this information sheet to keep.

Please put your initials in the "YES" or "NO" box to indicate your answer.

I choose to be interviewed.

YES	*NO*

Name of Parent/ Responsible Adult Providing Consent (printed)
** Only required if respondent is age 15–17*

Signature or Fingerprint of Parent/ Responsible Adult Providing Consent Date
** Only required if respondent is age 15–17*

Name of Participant (printed)

Signature or Fingerprint of Participant Date
(woman 18+ providing consent/woman 15–17 providing assent)

Name of Survey Staff Administering Consent (printed) Position/Title

Signature of Survey Staff Administering Consent Date

* If the participant is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the participant, and after they have orally consented to their participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the participant, and that informed consent was freely given by the patient.

Name of Person Witnessing Consent (printed)

Signature of Witness Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga
O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong
O No Translation provided (respondent can read English)

2024 Uganda Malaria Indicator Survey (UMIS)
PARENTAL CONSENT FORM FOR MALARIA TESTING
(Children 6 months to 4 years of age)

Project Title: 2024 Uganda Malaria Indicator Survey

Funding Source: United States Agency for International Development President's Malaria Initiative (USAID/PMI), The Government of Uganda, and the Global Fund to Fight Against Aids, Malaria and Tuberculosis (GFATM)

Site of Research: Randomly selected clusters across Uganda

Principal Investigators: Dr. Jimmy Opigo, Dr. Bosco Agaba

Version number: 2.0

Version date: 19 November 2024

SURVEY SUMMARY

As part of this survey, we are asking children all over the country to take a test to see if they have malaria. Malaria is a serious illness caused by a parasite transmitted by a mosquito bite. This survey is being conducted by the Uganda National Malaria Control Division and the Uganda Bureau of Statistics. The results of this survey will assist the government to develop programs to prevent and treat malaria. We ask that all children age 6 months through 4 years take part in malaria testing. The tests require a few drops of blood from a finger or heel and testing should take approximately 30 minutes. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for malaria immediately, and the results will be told to you right away.

A few blood drops will be collected on slide(s) and filter paper and taken to a laboratory for testing. You will not be told the results of the laboratory testing. All results will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Before you decide if you want to participate, we would like to explain the purpose of the survey, how the survey will be done, and any risks and benefits to you. This is a consent form. It gives information about the survey. You are free to ask questions at any time. After this consent form is read to you, and your questions have been answered, we will ask if you want to be in the survey. If you agree to participate, we will ask you to sign this consent form. You will get a copy of this form to keep.

PROCEDURES

If you agree to for your child to participate in this survey, the following will happen:

a. After the consent form is signed, a survey team member will ask you a few survey questions, they will then take a few drops of blood from your child's finger or heel. The blood will be tested for malaria immediately, and the results will be told to you right away.

b. If the results show that your child has uncomplicated malaria, we can give them free medicine. The medicine is called Artemether-Lumefantrine (AL) Fixed Dose Combination. AL

is very effective and, in a few days, it should get rid of the fever and other symptoms. You do not have to give the child the medicine. It will be up to you.

c. If your child tests positive for malaria and shows signs suggestive of severe malaria, we will be unable to provide treatment for your child since the treatment we have will not work. Instead, we will refer your child to the nearest health facility for further assessment and treatment.

d. A few blood drops will also be collected on slide(s) and filter paper and taken to a laboratory for testing. You will not be told the results of the laboratory testing. All results will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

VOLUNT ARY PARTICIPATION

Your child's participation in this survey is your choice. You may choose either to have your child take part or not to take part. If do agree to have your child participate, you can withdraw them from the survey at any time (verbally).

DISCOMFORT AND RISKS

- **Risks of taking blood:** Your child might feel a small amount of discomfort or have a small amount of bruising on their finger or heel where the blood sample is taken. The choice to participate in this survey is entirely yours and you may choose not to participate. You will not be penalized for non-participation.

- **Confidentiality:** Other people may learn that you are part of this survey. However, we will not allow people who are not working for the survey to see any survey participants' medical information.

BENEFITS

If you agree to take part in the survey, we will test your child for malaria using a rapid diagnostic test. We will know whether your child has malaria within 15 minutes of administering the test and, if they are positive and are not showing any symptoms of severe malaria, we will be able to treat your child now with an effective first line treatment. Additionally, the information which we get from this survey will help Uganda and other countries to decide on the how to design and implement more effective control programs to protect people against malaria.

COMPENSATION

There is no compensation for participation in the survey. Your participation in this survey is voluntary. But we hope that you participate since your involvement will allow us to learn more about malaria in Uganda and improve malaria programs and interventions.

CONFIDENTIALITY STATEMENT

The records concerning your child's participation are to be used only for the purpose of this survey. Your child's name will not be used on any study forms or labels on laboratory specimens or in any report resulting from this survey. At the beginning of the survey, we will assign your child an identification number and this number will be used on the forms and on the laboratory specimens. Any information obtained in connection with this survey will be kept strictly confidential. Only members of the study team will have access to information linking your child's name with their study number.

FREEDOM TO WITHDRAW FROM THE SURVEY

Taking part in this survey is a choice. You may choose to have your child tested for malaria or not. If you decide to have your child tested, you may stop the testing at any time. No matter what decision you make, there will be no penalty to you.

USE OF SAMPLES
The blood collected and tested using the rapid diagnostic test will allow us to immediately determine whether your child has malaria. These results will be shared with you.

The blood collected on the microscope slides will be used to confirm malaria infection using microscopy in the laboratory. Researchers in the laboratory will also use the dried blood spot samples to test for malaria infection, and study malaria drug and diagnostic resistance. Your child's samples will not have names or identifying information; only numbers will identify these samples so that they cannot be readily identified. We will not provide you with the results of the laboratory tests. The only risk to you may be loss of confidentiality, but all efforts are being made to protect your child's identity.

Following this consent, we will read another consent form asking your permission to save your child's leftover samples in what is called a "specimen bank" for possible future research. We will provide more information on this after we have gone through this consent form. If you do not consent to additional testing, your child's leftover samples will be discarded after all malaria lab testing has been completed.

Authorized representatives from the following organizations may review your child's data for the purpose of monitoring or managing the conduct of this survey:

- Representatives of Uganda Bureau of Statistics
- Representatives of The National Health Laboratory Services
- Representatives of the Ministry of Health
- Representatives of the National Malaria Control Division of the Ministry of Health
- Representatives of ICF

QUESTIONS ABOUT THE SURVEY
For questions about the survey, you may call the principal investigator, Dr. Jimmy Opigo, and his staff at 0772962601. You may also call Dr. Isaac Ssewanyana on phone number 0752900392. We will give you free access to a telephone line.

QUESTIONS ABOUT YOUR RIGHTS AS A RESEARCH PARTICIPANT
For questions about your rights as a research participant or research-related harm, you may contact Mr. Tom Lakwo, the chair of the Vector Control Division Research and Ethics Committee which approved this study, at telephone number 0772438311.

LEAVE BLANK FOR PRINTING

MALARIA TESTING—
PARENT/GUARDIAN COPY

PARTICIPANT STATEMENT
I have been informed verbally and in writing about this survey and understand what is involved. I also know whom to contact if I need more information. I understand that confidentiality will be preserved. I understand that l am free to withdraw my child's participation from the survey at any time without penalty. I agree to have my tested for malaria and will be given a copy of this information sheet to keep.

Please put your initials in the "YES" or "NO" box to indicate your answer.

I choose to have my child tested for malaria.

YES	*NO*

Name of Participant (printed)

Name of Parent/Responsible Adult (printed)

Signature or Fingerprint of Parent/Responsible Adult Date

Name of Survey Staff Administering Consent (printed) Position/Title

Signature of Survey Staff Administering Consent Date

* If the participant is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the participant, and after they have orally consented to their participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the participant, and that informed consent was freely given by the patient.

Name of Person Witnessing Consent (printed)

Signature of Witness Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga
O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong
O No Translation provided (respondent can read English)

LEAVE BLANK FOR PRINTING

MALARIA TESTING—
UBOS/NMCD COPY – GIVE TO YOUR SUPERVISOR

PARTICIPANT STATEMENT
I have been informed verbally and in writing about this survey and understand what is involved. I also know whom to contact if I need more information. I understand that confidentiality will be preserved. I understand that l am free to withdraw my child's participation from the survey at any time without penalty. I agree to have my tested for malaria and will be given a copy of this information sheet to keep.

Please put your initials in the "YES" or "NO" box to indicate your answer.

I choose to have my child tested for malaria.

YES	*NO*

Name of Participant (printed)

Name of Parent/Responsible Adult (printed)

Signature or Fingerprint of Parent/Responsible Adult Date

Name of Survey Staff Administering Consent (printed) Position/Title

Signature of Survey Staff Administering Consent Date

* If the participant is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the participant, and after they have orally consented to their participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the participant, and that informed consent was freely given by the patient.

Name of Person Witnessing Consent (printed)

Signature of Witness Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga
O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong
O No Translation provided (respondent can read English)

2024 Uganda Malaria Indicator Survey (UMIS)
PARENTAL CONSENT FOR FUTURE USE OF BIOLOGICAL SPECIMENS
(Children 6 months to 4 years)

Protocol Title: 2024 Uganda Malaria Indicator Survey

Funding Source: United States Agency for International Development President's Malaria Initiative (USAID/PMI), The Government of Uganda, and the Global Fund to Fight Against Aids, Malaria and Tuberculosis (GFATM)

Site of Research: Randomly selected clusters across Uganda

Principal Investigators: Dr. Jimmy Opigo, Dr. Bosco Agaba

Version number: 2.0

Version date: 19 November 2024

INTRODUCTION

You have agreed to have dried blood spot samples taken from your child to be tested for malaria. These samples may also be useful for future research on malaria. We would like to request your permission to save your child's leftover samples in what is called a "specimen bank" for possible future research. Any future research must be approved by the appropriate ethics committee or Institutional Review Board. If you agree to have your child's samples saved for future research, the dried blood spot samples would be stored long-term at Uganda National Health Laboratory Central Public Health Laboratories (NHL/CPHL) in Kampala.

PROCEDURES

If you agree to have your child's dried blood spot samples saved for additional future testing, the following will happen:

a. Your child's dried blood spot sample will be used to confirm if there are malaria parasites or not

b. Your child's dried blood spot sample will be used to study the various types of malaria parasites species

c. Your child's dried blood spot sample will be used to study malaria drug and diagnostic resistance.

d. Your child's dried blood spot sample will be used only for malaria research and will not be sold or used for the production of commercial products.

e. Parasite genetic research may be performed on samples. No human genetic studies/information will be studied on these samples.

f. These dried blood spot samples will be identified only by codes so that they cannot be readily identified with your child.

g. If you choose not to have your child's samples saved for additional testing, they will be destroyed following the malaria testing you agreed to in the first consent form.

LEVEL OF IDENTIFICATION
Your child's dried blood spot samples will be coded so that your child's name cannot be readily identified. Reports about research done with your child's samples will not be put in their medical record and will be kept confidential to the best of our ability.

ESTIMATED SAMPLE STORAGE DURATION
If you agree to have your child's samples for additional testing, your child's dried blood spot samples will be stored approximately for 10 years for future malaria research purposes.

RISKS
There are few risks to your child from future use of their dried blood spot samples. We will not have access to your child's health records, and we will only identify samples with codes. As a result, risks of loss of privacy will be minimal.

BENEFITS
There will be no direct benefit to your child. From studying your child's samples, we may learn more about malaria in children: how to prevent malaria, how to treat malaria, and how to cure malaria.

RESEARCH RESULTS/MEDICAL RECORDS

1. Results from future research using your child's dried blood spot samples may be presented in publications and meetings but participant names will not be identified.

2. Reports from future research done with your child's dried blood spot samples will not be provided to you.

QUESTIONS ABOUT THE SURVEY
For questions about the survey, you may call the principal investigator, Dr. Jimmy Opigo, and his staff at 0772962601. You may also call Dr. Agaba Bosco at 0772902105. We will give you free access to a telephone line.

QUESTIONS ABOUT YOUR RIGHTS AS A RESEARCH PARTICIPANT
For questions about your rights as a research participant or research-related harm, you may contact Mr. Tom Lakwo, the chair of the Vector Control Division Research and Ethics Committee which approved this study, at telephone number 0772438311.

FREEDOM TO REFUSE
You can change your mind at any time about allowing your child's samples to be used for future research. If you do, contact Mr. Tom Lakwo, Phone Number: 0772438311. Then your child's dried blood spot samples will no longer be made available for research and will be destroyed. Whether or not you allow us to use your child's dried blood spot samples in future research will not have any effect on your child's participation in the survey, your child can still receive the free malaria test today.

FUTURE USE OF BIOLOGICAL SPECIMENS— PARENT/RESPONSIBLE ADULT COPY

WHAT YOUR SIGNATURE OR THUMBPRINT MEANS

This consent form will be given to you. Your signature or thumbprint below means that it has been explained to you about your child's dried blood spot samples to be used for future research and that you have had the opportunity to ask questions. If you wish to allow your child's samples to be used for future research, you should sign or thumbprint below.

Name of Child

Name of Parent/Responsible Adult

Signature or Fingerprint* of Parent/Responsible Adult Date

Name of Investigator Administering Consent (printed) Position/Title

Signature of Investigator Administering Consent Date

*If the parent or guardian is unable to read and/or write, an impartial witness should be present during the informed consent discussion. After the written informed consent form is read and explained to the parent or guardian, and after they have orally consented to their child's participation in the survey, and have either signed the consent form or provided their fingerprint, the witness should sign and personally date the consent form. By signing the consent form, the witness attests that the information in the consent form and any other written information was accurately explained to, and apparently understood by, the parent or guardian, and that informed consent was freely given by the parent or guardian.

Name of Person Witnessing Consent (printed)

Signature of Person Witnessing Consent Date

Electronic version of the consent form also read to/provided to the parent/responsible adult in:

O Luganda O Luo O Lugbara O Lusoga

O Runyankore/Rukiga O Runyoro/Rutoro O Ateso O Karamajong

O No Translation provided (respondent can read English)

LEAVE BLANK FOR PRINTING

FUTURE USE OF BIOLOGICAL SPECIMENS—
UBOS/NMCD COPY – GIVE THIS COPY TO YOUR SUPERVISOR

WHAT YOUR SIGNATURE OR THUMBPRINT MEANS

This consent form will be given to you. Your signature or thumbprint below means that it has been explained to you about your child's dried blood spot samples to be used for future research and that you have had the opportunity to ask questions. If you wish to allow your child's samples to be used for future research, you should sign or thumbprint below.

Name of Child

Name of Parent/Responsible Adult

Signature or Fingerprint* of Parent/Responsible Adult Date

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ADDITIONAL DHS PROGRAM RESOURCES

The DHS Program Website – Download free DHS reports, standard documentation, key indicator data, and training tools, and view announcements.	DHSprogram.com
STATcompiler – Build custom tables, graphs, and maps with data from 90 countries and thousands of indicators.	Statcompiler.com
DHS Program Mobile App – Access key DHS indicators for 90 countries on your mobile device (Apple, Android, or Windows).	Search DHS Program in your iTunes or Google Play store
DHS Program User Forum – Post questions about DHS data and search our archive of FAQs.	userforum.DHSprogram.com
Tutorial Videos – Watch interviews with experts and learn DHS basics, such as sampling and weighting, downloading datasets, and How to Read DHS Tables.	www.youtube.com/DHSProgram
Datasets – Download DHS datasets for analysis.	DHSprogram.com/Data
Spatial Data Repository – Download geographically linked health and demographic data for mapping in a geographic information system (GIS).	spatialdata.DHSprogram.com
Learning Hub – Access online courses for independent learning and workshop participation, communities of practice, and other training resources.	Learning.DHSprogram.com
GitHub – Open access to Stata, SPSS and R code for DHS indicators for public use.	Github.com/DHSprogram

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